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This page image: Air
Transat Airbus A330
(Gilbert Hecherna)

This year's Farnborough Airshow (see following pages) was very interesting in a number of ways. Although there were relatively few announcements made – in terms of sales – over \$70 billion was apparently spent by customers and this was mainly on the smaller narrowbody aircraft.

The two highlights of the event for many were the Qatar Airways' Boeing 787 Dreamliner and the Malaysia Airways' Airbus A380, but it was a great shame that neither aircraft (and several others from the static park) disappeared before the public weekend. This has unfortunately been the case at Farnborough during this writer's lifetime. Perhaps the organisers should try offering a few 'inducements' to manufacturers to keep the aircraft at the Hampshire airfield longer?

I am often dismayed by way that aviation news is reported in the general press. What appears to be a major story from the headline often turns out to be little more than a minor incident when you read on. Of course dramatic headlines sell papers, but they can cast a black cloud over an airline, airport or aircraft type and it's likely that this is what the public will remember. One of the more recent examples concerned an aircraft belonging to a UK regional carrier that had to make an emergency landing due to a "cockpit fire" with "smoke billowing into the cabin" and "passengers

screaming in panic." What had actually happened was that a fuse had blown on the aircraft's air conditioning unit and the pilot elected to make a diversion to an airport where the carrier had an engineering base to get it fixed. A spokeswoman for the company flatly denied the alarmist reports. "There was no fire in the cockpit, there was no smoke, there was no screaming, there was no emergency landing," she said. "The Air Accidents Investigation Branch confirmed it was a non-reportable incident and the aircraft was back in the air within an hour." There was no apology from the newspapers, but there should have been. How many people will now think twice about flying with a carrier that has "cockpit fires"?

Tony Dixon
Editor

Tony Dixon



Cover photo: Qatar Airways Boeing
787 Dreamliner at Farnborough.
(Airteamimages.com/Darryl Morrell)



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Farnborough 2012

THE FARNBOROUGH International Airshow 2012 was held between July 9 and 15. Over 70 delegations from 46 countries visited with 1,506 exhibiting companies – although trade visitors overall were down 9% compared with 2010. Despite apparently being 'quiet' in terms of major aircraft orders, more than \$72 billion was spent – an increase

on the \$47 billion in 2010. Star attractions were the Qatar Airways Boeing 787 Dreamliner and the Malaysia Airlines Airbus A380, although both departed before the public days. The UK's poor summer weather caused disruption to varying degrees with many of the grassed areas being a little muddy – to say the least! (Photos Airbus)



Prime Minister at Farnborough

AT THE start of the show, Malaysia Airlines' second Airbus A380 received a VIP visit from UK Prime Minister David Cameron. He was welcomed onboard by Group CEO Ahmad Jauhari Yahya and Fabrice Brégier, President and CEO of Airbus, following the event's official opening ceremony. The carrier only started services with the type on July 2, linking Kuala Lumpur with London/Heathrow. The aircraft at Farnborough – the second of six on order – was expected to be delivered to the airline in August. At the start of the week, it participated in the daily flying programme. (Photo Airliner World)



Boeing Goes to the MAX

IN COMPARISON to the Farnborough Show in 2010 when Boeing secured orders and commitments for a mere 68 aircraft, the 2012 event was far more productive. In fact, the one single order announced on the final trade day (Thursday) amounted to 150 737s from United Continental Holdings. It took the orders for what the company promotes as "the world's most popular single-aisle jetliner" to more than 10,000 in total – and this from the world's largest airline. Equipped with new LEAP-1B engines from CFM International, and improvements such as the Advanced Technology Winglet, the company claims the new 737 MAX – due to enter service in 2017 – will reduce fuel burn and CO₂ emissions by 13% while maintaining an 8% operating cost advantage over future competition.

United Airlines

Worth \$14.7 billion at list prices, major US carrier United has made a commitment for 100 of the new 737 MAX 9s and 50 Next Generation 737-900ERs (Extended-Range).

"This order is a major step in building the world's leading airline, and we look forward to offering our customers the modern features and reliability, while also making our fleet more fuel efficient and environmentally friendly," said Jeff Smisek, United's President and CEO via a webcast at the show.

United becomes the North American launch customer for the 737 MAX 9 and means that the new variant now has more than 1,200 orders and commitments from 18 customers. Counting all variants, the 737 programme now stands at 10,039 orders.

"To witness the first commercial airplane to surpass 10,000 orders is monumental," said Beverly Wyse, Vice

President and General Manager of the 737 programme. (Photo Boeing)

Virgin Australia

Immediately prior to the show, Virgin Australia finalised a firm order for 23 737 MAXs with options for an additional four, becoming the first airline in the country to commit to the new variant.

Avolon

Irish-based aircraft lessor Avolon is to purchase ten 737 MAX 8s and five 737 MAX 9s, as well as 10 Next-Generation 737-800s. The commitment has a list-price value of \$2.3 billion and also includes reconfirmation rights for five more 737 MAXs.

"This announcement once again reflects both the scale of our ambition and the strength of our financial backing," said Domhnall Slattery, CEO of Avolon. "It also reflects our commitment to our customers as we enhance our fleet, grow our business and continue to deliver superior risk-adjusted returns for our shareholders." Once this commitment is finalised, Avolon's backlog will grow to 36 737s.



GECAS

Aircraft lessor GE Capital Aviation Services (GECAS) has announced a commitment to purchase 75 737 MAX 8s and 25 Next-Generation 737-800s. Once the details have been finalised, the aircraft will be added to the Boeing Orders and Deliveries website as a firm order.

ALAFCO

Kuwaiti aircraft leasing company ALAFCO announced a commitment for 20 737 MAX 8s valued at \$1.9 billion at current list prices. The company ordered six 737-800s in March 2007 with the last delivered in July 2011. "This is the first commitment for the 737 MAX from the Middle East, which is one of the industry's highest growth regions," said President and CEO of Boeing Commercial Airplanes, Ray Conner.

Air Lease Corporation

Air Lease Corporation ordered 60 737 MAX 8s and 15 MAX 9s plus reconfirmation rights on 25 more (unspecified variants) at a list price cost of some \$7.2 billion.

Upated Rolls 787 Engine

ROLLS-ROYCE has revealed it will develop the Trent 1000-TEN, an advanced version of the Trent XWB. According to the manufacturer, TEN stands for Thrust, Efficiency and New technology and claims an improvement of up to 3% in specific fuel consumption compared with the Trent 1000s in service today – powering the Dreamliners operated by launch customer, All Nippon Airways (ANA). The TEN will be certified to 76,000lb of thrust, with the capability to deliver 78,000lb, and will become the Rolls engine offering for the 787-8 and -9 from 2016 onwards. The Trent XWB, from which the -TEN will be derived, is under development for the Airbus A350 XWB. (Photo Rolls-Royce)



"It is a natural follow on from our commitment for 70 plus Next-Gens, which have all been placed," said Steven Udvar-Hazy, the company's chairman and CEO. "Deliveries from this order will start in 2018 and it will represent a step-change improvement that our airline clients need for us to compete in the future. I did make some sceptical comments in March over the variant, but Boeing and engine manufacturer CFM have worked hard to change the concept. It is a different aircraft today."

Chairman and CEO of Air Lease Corporation, Steven Udvar-Hazy and the President and CEO of Boeing Commercial Airplanes, Ray Conner at the signing ceremony for the new aircraft. (Airliner World)



Qatar Dreamliner Debut

THE FIRST Boeing 787 Dreamliner for Qatar Airways took centre stage in the static park and also performed in the daily flying display – despite not being due for delivery until the end of September. The aircraft has a two-class interior with a three, plus three, plus three economy section and a one, plus two, plus one business area (with angled window seats). Speaking to the airline's

CEO Akbar Al Baker onboard the aircraft, *Airliner World* asked him about the initial plans for its introduction. "After a week of promotional trips in the Gulf area, we will start serving London in October," he said. "We are due to get five aircraft this year and will add European destinations such as Frankfurt and then look east to Perth, Australia."

(Photo *Airliner World*)



Longer-Range MAX

THE NEW variant of the Boeing 737 is to have the capability to fly further than originally planned. "We continue to make steady progress toward our development goals," said Beverly Wyse, Vice-President and General Manager of the 737 Program. "We are able to firm up our maximum take-off weight projections, which allow us to confirm that the 737 MAX will fly farther and offer more revenue potential than its predecessor and future competitor." "A lower operating empty weight, but higher maximum take-off weight, allows customers to increase payload

or the range of the airplane beyond what the main competition can offer," added Joe Ozimek, Vice President of 737 MAX product marketing.

Comparative* maximum take off weights and range limits:

| Variant | MTOW (lb) | Range (nm) | Two-class seating |
|-----------|-----------|------------|-------------------|
| 737-700 | 154,400 | 3,400 | 126 |
| 737 MAX 7 | 159,400 | 3,800 | 126 |
| 737-800 | 174,200 | 3,080 | 162 |
| 737 MAX 8 | 181,200 | 3,620 | 162 |
| 737-900ER | 187,700 | 3,055 | 180 |
| 737 MAX 9 | 194,700 | 3,595 | 180 |

New Flight Deck Technologies

ROCKWELL COLLINS has unveiled flight deck technologies jointly developed with Boeing for retrofit on 757s and 767s, said to be "inspired by flight deck improvements offered on the Boeing 787." The new features include a comprehensive electronic flight instrument system (EFIS) and engine indicating crew alerting advanced flight display

system (EICAS) as well as advanced NextGen communication and surveillance equipment. Supplemental type certification is expected in the second quarter of 2014. Rockwell Collins will also offer an integrated head-up guidance unit with future Synthetic Vision Systems capability.

Demand for Airline Pilots

Boeing believes the world will face an unprecedented demand for airline pilots and maintenance technicians over the next 20 years as global economies expand and airlines take delivery of tens of thousands of new commercial aircraft.

The company has released its 2012 Pilot and Technician Outlook which indicates that by 2031 the world will require: 460,000 new commercial airline pilots 601,000 new commercial airline maintenance technicians

"In many regions of the world, our customers are facing challenges in recruiting personnel due to pilot and technician shortages," said Sherry Carbary, Vice President, Boeing Flight

Services. "We are committed to developing innovative solutions that address this critical need." Projected demand by region:

Asia Pacific – 185,600 pilots and 243,500 technicians

Europe – 100,900 pilots and 129,700 technicians

North America – 69,000 pilots and 92,500 technicians

Middle East – 36,100 pilots and 53,700 technicians

Latin America – 42,000 pilots and 47,300 technicians

Africa – 14,500 pilots and 16,200 technicians

Russia and CIS – 11,900 pilots and 18,100 technicians

Production Rate Increases

Boeing's Commercial Airplanes' President and CEO Ray Conner was very positive about the company's goals and ambitions saying that it is hitting its stride on performance and making significant progress on new aircraft programmes.

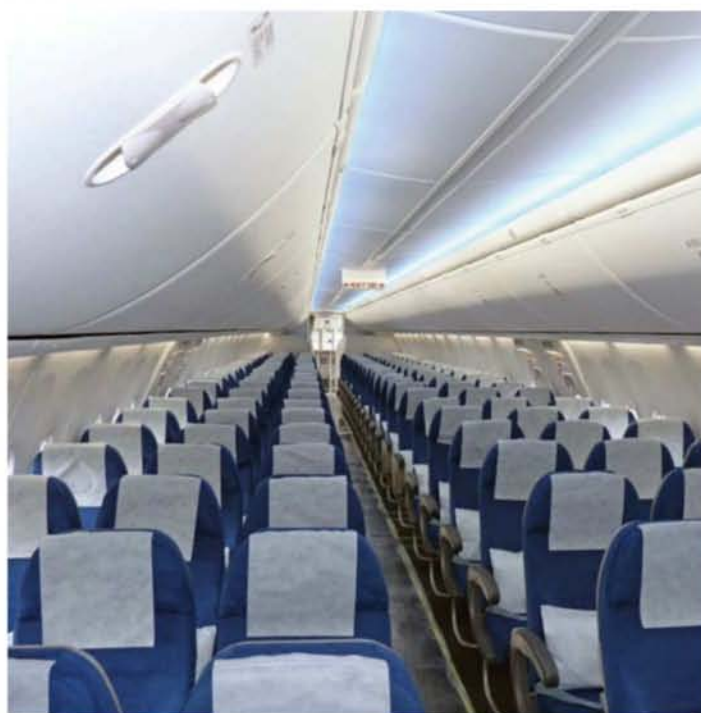
"We're seeing levels of demonstrated performance that give us confidence in our ability to increase production rates and deliver on our promises to customers," he said. "We're also working closely with our suppliers to make sure they're able to increase capacity and make the necessary investments to increase production with us."

The company has a backlog of more than 4,000 aircraft, equating to nearly seven years of production at current rates.

However, by the first half of 2014, it plans to produce 30% more than today. In addition, the company's Current Market Outlook forecasts a market for 34,000 aircraft worth \$4.5 trillion over the next 20 years.

"We have time to make the right decisions when it comes to improving the 777 family thanks to our strong market position," Conner added. "Meanwhile, the 787-10X will extend and complement the 787 family and be the best in its class. We are absolutely committed to both of these airplanes."

This Korean Air Boeing 737-900ER was present in the static park. Already in service, it has the Sky Interior with higher roof space and larger overhead bins. (*Airliner World*)



Orders For ATR

IN A press briefing at the ATR Chalet – next to a specially painted ATR 72-600 with 'I am ATR – the greenest regional aircraft in the world' – CEO Filippo Bagnato was very upbeat about the

immediate future for the aircraft type. There is a healthy order book and orders continue to be placed. Announcing a batch of new orders, he said: "I have been authorised by the management of Aer Arann to tell you that we have reached an agreement for eight aircraft. We are still finalising the fine detail," but revealed deliveries would start in 2013.

He continued by announcing that two Asian airlines would be adding to their turboprop fleets. Taiwan-based TransAsia Airways placed a firm order for eight ATR 72-600s, plus one option, in a deal worth over \$210 million, while Vientiane-based Lao Airlines purchased two more in an order valued at \$47 million (based on list prices). The 72-seat aircraft will replace earlier ATR 72-500

models with both airlines. Deliveries are scheduled from 2014-2017 (TransAsia) and late 2012-2013 (Lao). Meanwhile, Air Lease Corporation has signed a contract for two ATR 72-600s – conversion of two of ten options from an earlier order – and Nordic Aviation Capital added to its portfolio of 12 ATR 72-600s and -500s by adding a single -600. (Photo Key – Alan Warnes)



PW1400G Delivery in 2015

DELIVERY OF the Pratt & Whitney (P&W) PW1400G engine – intended for use on Irkut's MC-21 regional airliner – has been pushed back three months to the first quarter of 2015.

"The delay was due to finalising all of the requirements as well as the contract," P&W's Vice President Next-Generation product family, Bob Saia, said at a press briefing. "We've been working with

Irkut since 2009. The company wanted to make the first flight at the end of 2014 but it's like baking a cake, it takes a certain amount of time for the oven to allow the cake to cook. We have just completed our contract with Irkut for elements that affect power supply and hydraulic supply and we will be in position to deliver the engines for the initial flight in the first quarter of 2015," he said.



Taking up a large area in the static park was this Douglas DC-10-40, N974VV (c/n 46974), of Omega Air. The ex-Japan Airlines aircraft has been converted into an airborne refueller for the military. (Key – Alan Warnes)

Not Just Airliners



The Finmeccanica area contained a large number of helicopters of various sizes – as well as an Alenia C-27J Spartan transport. (Airliner World)

Engine Alliance

IN A breakfast meeting with Mary Ellen Jones, President of Engine Alliance (EA) recent enhancements to the GP7200 engine – fitted to 34 of the Airbus A380s in service – were revealed. Since its introduction in December 2007, EA has improved its performance by 1.3% and reduced its weight by over 200lb (90kg). The most recent modi-

fications include better sealing of the high pressure turbine and an improved blade. "We now have over one million flight hours on aircraft in service," she said. "The highest being [as of July 11] 14,399 hours. We have 600 more on order – and 145 operating in the fleet already. A total of 11 more aircraft will be delivered this year, plus 17 in 2013."

Star Visitor

Although not participating in the show, this Antonov An-12BP, 11309 (c/n 00347510), of Gromov Air/Irkut Avia was the 'star' visitor for many enthusiasts. It visited twice and carried the Yakovlev Yak-130 to and from Russia. (Richard Vandervord)



CSeries Order Possible

THE CEO of low-cost carrier AirAsia, Tony Fernandes, confirmed he is in preliminary talks to buy up to 100 Bombardier CSeries CS300s.

"We are taking this very seriously. It is an impressive aircraft and we have a good feeling about it," he said. "The advantage is that the CSeries can get into a lot of smaller airports to which we currently do not have access. And there is the price, and this looks like it could be a very affordable aircraft. We are currently a very big Airbus customer

and so this is a very big decision." He added that the aircraft would supplement its fleet of Airbus A320s and add to the 200 A320neos that the carrier has ordered.

"We live and die by cost and that will be crucial, but we also hope that Pratt & Whitney, who are supplying the engines, will be as enthusiastic as Bombardier about this aircraft," he added. The airline would like a 160-seater aircraft, but this is more than the stated 150-seat maximum at present.

United Aircraft Corporation

RUSSIAN JOINT Stock Company, United Aircraft Corporation (UAC) has received more than 300 commercial aircraft orders (Sukhoi SSJ100, Antonov An-148 and Irkut MC-21), over 270 combat aircraft orders and over 100 transport aircraft orders in 2012. "The revenue share will see the military share dropping from over 80% to around 58% over the next two years, with commercial being the largest growth area," said President and Chairman of its Executive Board, Mikhail Pogosyan. "We've also seen a change with our services business growing to provide 16% of revenue against 84% from manufacturing." He added that in 2012, 20 more Superjets will be delivered, plus work is continuing on a new Ilyushin Il-76, and the company is still looking at resuming An-124 production. "We are also working with the Ukrainians on the An-70," he continued.

Certification For Twin Otter Series 400

VIKING AIR of Victoria, British Columbia, Canada has received type certification for the DHC-6 Series 400 Twin Otter, from both the FAA and the Russian Interstate Aviation Committee Aviation Register (IACAR).

The US type certification will pave the way for the delivery of three aircraft ordered by the US Army Golden Knights

Parachute Team – the first of which has recently arrived at the Viking Factory Endorsed Service Centre in Murrieta, California for incorporation of customised military modifications.

The approvals come just weeks before the scheduled delivery of the first of two aircraft for Russian launch customer Vityaz Avia Corporation of Moscow.

China Express Orders six CRJ900s

WITH AN aircraft in its colours in the static park at the show, China Express Airlines has converted a previously announced conditional order for six Bombardier CRJ900 NextGen regional jets to a firm order, plus five options.

The Guiyang-based carrier currently operates five CRJ200s and will be the first to use the larger variant in China. "We are working closely with local airlines, suppliers and stakeholders to assist in fleet and infrastructure expansion to

support the development of China's fleet as it grows to become the world's second largest market for new aircraft deliveries," said Bombardier's Vice President-sales for China and North Asia, Andy Solem. (Photo Airliner World)



in brief

Airbus hosted a series of forums and workshops to provide the opportunity for job seekers to discuss their possible future career opportunities with Airbus engineers, human resources and business experts. The manufacturer plans to recruit over 4,000 people in 2012. Workshop participants had the opportunity to learn more about the A320neo and the A350 XWB.

The holding company for US carriers **SkyWest Airlines and ExpressJet Airlines** – the two largest combined regional airline operators – has reached an agreement in principle for 100 Mitsubishi Regional Jets (MRJ). Mitsubishi Aircraft and SkyWest intend to convert this into a definitive agreement in the coming weeks. Deliveries would start in 2017, with the order being fulfilled before the end of 2020.

General Electric says it will improve parts of its CF6-80E1 engine to provide up to a 1% improvement in fuel efficiency for Airbus's enhanced A330s with a 240 tonne take off weight capability and an extended range. Initial deliveries of the newly enhanced CF6-80E1 are targeted for 2015.

The Irkut Corporation of Russia – part of United Aircraft Corporation – has agreed to a five year master service agreement to provide Jeppesen Electronic Flight Bags, flight planning, charting, navigation data and mobile delivery solutions for the development of the MC-21 regional jet, which is expected for entry into service in 2017. (Photo Airliner World)



Boeing plans to open an extra production line for the 737 at its Renton, Washington factory, adding to the two in operation. It will be introduced when the first units of the new MAX arrive for final assembly.

Maintenance, repair and overhaul (MRO) provider British Airways Engineering, has been selected to provide its global line maintenance and engineering services to Boeing's GoldCare programme. The company now joins a choice group of suppliers that Boeing can select to support their GoldCare fleet maintenance requirements for the 787 Dreamliner and Next-Generation 737.

China's **Hebei Airlines** has ordered five Embraer 190s in a deal valued at \$226 million at list prices. The aircraft will be delivered by the end of 2013 and will join two more that have been in service with the Shijiazhuang-based carrier since January.

Airbus News



The prototype Airbus A320 fitted with wingtip 'Sharklets' paid a short visit to the Show. (Airliner World)

AIRBUS ENJOYED a successful Farnborough International Air Show 2012, securing deals worth an estimated \$16.9 billion. The European manufacturer landed firm orders for 54 aircraft while Memorandums of Understanding (MoU) were signed for a further 61 examples. The best-selling A320 narrowbody family continued to lead the way for Airbus with 86 commitments for the single-aisle jet worth \$8.4 billion. The next-generation neo model, which is only just entering production, attracted 29 new commitments from Avolon, Middle East Airlines and Arkia Israel Airlines. However, unlike the 2011 Paris Air Show, almost two thirds of the total orders for the A320 were for the 'current engine option' family. The largest commitment

was an MoU from China Aircraft Leasing Company (CALC) for 36 examples, while Russian carrier UTair placed a firm order for 20 A321s.

Airbus also used the show to introduce a higher gross weight version of its A330 wide-body jet. On the -300 series, the rise from 235 to 240 tonnes effectively increases the type's range to 5,950nm (11,020km), allowing it to operate between London and Tokyo or Beijing and San Francisco. The higher gross weight jet, which is expected to enter service in mid-2015, received a timely boost from US lessor and financier, CIT Group, which became the launch customer for the type with a \$2.3 billion order for ten examples. Synergy Aerospace also firmed up its commit-

ment for nine aircraft, including six -200s and three freighters.

Surprisingly, there were no orders placed for the A380 Superjumbo, despite the manufacturer displaying a brand new example for Malaysian Airlines for the first three days of the event. However, the star of the show for the European manufacturer was its new A350 XWB, with Hong Kong-based Cathay Pacific Airways placing a \$4.2 billion order for ten Rolls-Royce Trent XWB-powered A350-1000s, while a further 16 of its previously ordered -900 series aircraft have also been converted to the larger, 350-seat model.

Airbus CEO Fabrice Brégier reflected on a successful show, commenting: "The quality of orders at Farnborough has

AIRBUS – Farnborough 2012 Orders

| Customer | Type | Number |
|--------------------------------|-----------|--------|
| Arkia Israel Airlines | A321neo | 4 |
| Avolon | A320neo | 15* |
| Cathay Pacific | A350-1000 | 10 |
| China Aircraft Leasing Company | A320 | 36* |
| CIT Aerospace | A330 | 10 |
| Druk Air | A319 | 1 |
| Middle East Airlines | A320neo | 10* |
| Synergy Aerospace | A330 | 9 |
| UTair | A321 | 20 |

* Memorandum of Understanding

been high, with significant endorsement from leading customers of our strategy to continuously innovate and improve our products." He added: "With the recent announcement last week to build an A320 production line in America, coupled with the start of production for the A320neo in Toulouse, Airbus is cementing its leading global position."

Successful Show For CFM

BEING THE sole provider of engines for the new Boeing 737 MAX, the large number of orders and commitments for the variant meant it was a successful Farnborough for CFM International with orders worth \$12.6 billion and commitments for 922 new engines.

United Airlines' firm order for 100 MAX and 50 additional CFM56-7B-powered NG 737-900ERs is worth approximately \$5 billion at list prices, while the GECAS commitments for 75 LEAP-1B-powered aircraft, in addition to 25 CFM56-7B-powered NG 737s, (\$2.4 billion).

This is closely followed by the 60 737 MAX 8s and 15 MAX 9s of the Air Lease Corporation (\$1.9 billion), ALFACO's commitment to purchase 20 MAXs (\$500 million) and Avolon's 25 – a mixture of MAX and NG versions (\$585 million). (CFM's LEAP 1B engine will be fitted to the MAX

while the NG 737 carries CFM56-7Bs.) Meanwhile, Brazilian low-cost carrier GOL Linhas Aéreas Inteligentes, the Apollo Aviation Group and Oman Air are the latest CFM customers to become part of the TRUEngine programme, which provides customer support.



Sukhoi brought an Aeroflot SuperJet 100, RA-89008 (c/n 95016) to the show – although no new orders were made for the type. The aircraft was actually delivered to Aeroflot earlier this year. (Key – Alan Warnes)

Superjet SSJ100

New Chinese Turboprop

LOOKING LIKE a cross between an ATR 72-600 and a Bombardier Dash 8-Q400, AVIC Aircraft of China has released details of its new 76-seat MA700 turboprop. The company claims the aircraft will consume 15 to 20% less fuel and have 10% lower operating costs than its current MA600. AVIC sees a worldwide market for some 800 MA700s in the future.

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BA Returns to Props

BA Cityflyer has wet-leased Saab 2000, G-CDEB (c/n 036), from Eastern Airways. The turboprop, which has been repainted in full livery, is being used to operate the new London City to Isle of Man service. (Simon Murdoch)



Bratislava Opens Extension

BRATISLAVA/LETISKO M. R. Štefánika Airport officially opened the second part of its new terminal building on July 13. The arrivals hall was the final element of a €46.6 million reconstruction project launched in 2008.

Airport CEO Maroš Jančula commented: "Today we are standing in the place of the original departures terminal, which was built during the 1970s. Last year, the old building gave way to this new construction, which symbolises the future of aviation not only in Slovakia, but also in the wider region at the inter-

section of four countries – Slovakia, the Czech Republic, Austria and Hungary. With the completion of this second phase of the terminal, we have succeeded in putting the whole concept into operation. It complies with needs of even the most demanding of passengers and offers a respectable gateway to the Slovak Republic."

The completed terminal building can handle up to 5 million passengers a year and accommodate both Schengen and non-Schengen operations. (Photo Martin Dichler)



Cuts at Air France

AIR FRANCE has announced further details of a restructuring plan that will reduce staff numbers by 5,100 by the end of 2013. The carrier is optimistic that approval of a new labour agreement by the airline's unions, along with natural wastage and a voluntary exit scheme, will avoid the need for compulsory redundancies.

The airline, part of the Skyteam alliance, currently employs almost 50,000 personnel but will not replace staff who depart and is expected to incentivise part-time working as it pushes to improve its economic efficiency by 20%.

The measures are part of the airline's contribution to Transform 2015, parent Air France-KLM group's recovery plan to reduce its €6.5 billion debt by €2 billion over the next three years.

The carrier is expected to launch a significant investment programme worth hundreds of millions of euros, introducing a new cabin and repositioning its long-haul operations. Air France will also group together its three subsidiaries, Brit Air, Regional and Airlinair, within a new regional hub, though it is believed to be considering putting loss-making CityJet up for sale.

in brief

Austrian Airlines has confirmed plans to phase out its last seven Boeing 737-800s by March 2013. The twinjets by Airbus A320s, the first two of which, OE-LBW (c/n 1678) and OE-LBX (c/n 1735), were delivered to the airline's Vienna base on July 11.

British Airways Engineering has been selected to provide MRO services to Boeing's GoldCare programme for both the 787 and 737 Next-Generation models.

LOT Polish Airlines is to sell Boeing 767-35D, SP-LPC (c/n 28656). The aircraft was originally operated on lease from Air Castle until it was involved in a gear-up landing at Warsaw in November 2011. The carrier elected not to repair the aircraft and will sell the airframe in its current condition.

Irish low-cost carrier **Ryanair** has announced plans to open a base at Maastricht, its first in the Netherlands, from December 1. The airline will use a single, based aircraft to operate 14 routes including Alicante, Dublin, Faro, Tenerife, London/Stansted and Malaga.

London/Oxford Airport introduced a new radar system in early July. The primary and secondary radar, manufactured by Thales, will enable the airport to handle overflights and IFR traffic more efficiently. (Photo London/Oxford Airport)



Lufthansa Cargo has reported a decline in air freight traffic of 9.2% for the first half of this year compared to the same period in 2011; the average load factors was 68.4%.

ExecuJet has launched the first free travel service for pets in partnership with Cambridge Airport – having won approval from the Defra for the UK's Pet Travel Scheme. This enables domestic cats and dogs to travel internationally without quarantine and overseas vet inspection.

OLT Express Germany has completed the acquisition of Stuttgart-based carrier Contact Air and expects to receive government approval by September.

Figures released by **Highland and Islands Airports** reveal that passenger numbers increased at Scotland's regional airports in June by 0.7% against the same period last year, despite unseasonable weather conditions and a difficult financial climate.

Several former British Midland International-bmi aircraft have begun appearing in the livery of new parent carrier British Airways, including Airbus A319-131, G-DBC8 (c/n 2188), which now sports the special 'Dove' colour scheme. (Nik French)

BMI Dove



Gatwick Eyes Expansion

LONDON'S GATWICK Airport has unveiled a new master plan outlining its development up to 2020 and beyond. The facility, which is the busiest single-runway airport in the world, currently handles around 34 million passengers a year but is expecting this figure to increase by 11 million by 2030.

The airport's CEO, Stewart Wingate, said: "Gatwick plays an important role in supporting growth in the local and wider UK economy. We are responsible for providing jobs to 21,000 people today and enabling the tourism industry to flourish and businesses to prosper.

Our finalised master plan sets out how we will achieve sustainable growth on our single runway in order that we can continue to support economic recovery and growth and open up further routes to emerging economies."

The projected growth has again prompted speculation that the facility requires a second runway. Wingate added: "We remain committed to honouring the 2019 agreement which prohibits the building of any second runway before that time. At the same time, and like any other business, our plans need to cater for all eventualities. We need to anticipate that,

in the long term, a second runway at Gatwick may be needed. This means we will continue to work in partnership with our local authorities to safeguard land for future expansion because we believe it to be sensible business practice and it supports current government policy." Since being acquired by Global Infrastructure Partners from BAA two-and-a-half years ago, Gatwick has benefited from £1.2 billion of investment, including a £750 million upgrade of its two terminal buildings.

The airport also played host to an Emirates Airbus A380 Superjumbo for

the first time on July 6 to mark 25 years of services between the UK and the carrier's Dubai, UAE base.

"Since 1987, Gatwick has been at the heart of our UK operation and we are proud to see our A380 touch down here today," said Laurie Berryman, Emirates Vice President UK. "When this special anniversary service departed for Dubai this afternoon, it did so with over 500 passengers on board. Given the popularity of the aircraft with passengers from the south-east, it is our hope that Gatwick will join our A380 network in the future." (Photo Gatwick Airport)



British Firms Push for an Alternative

FOUR DIFFERENT fuels have been selected to progress to the next stage of a scientific programme to evaluate sustainable alternatives for aviation. The scheme, run in partnership with Rolls-Royce and British Airways, is intended to identify practical alternatives to kerosene (Jet A-1). The four fuels – supplied by Applied Research Associates, Byogy

Renewable, Algaeon Inc in partnership with Swift Enterprises and Shell Research in partnership with Virent Energy Systems – will now be evaluated on their compatibility with aircraft fuel systems, impact on engine operability and emissions.

Rolls-Royce Environment Strategy Manager Jonathan Hart said: "This scientific testing programme will sig-

nificantly advance our understanding of the performance of these novel fuels, and support the wider use of sustainable and low carbon fuel within the aviation industry."

British Airways' Head of Environment, Jonathon Counsell, added: "Developing alternative, sustainable aviation fuel is an important part of a range of measures designed to help us achieve our

target of reducing net carbon emissions by 50% by 2050. We are proud that, together with Rolls-Royce, we are helping lead the implementation of biofuels into our industry."

The rig-testing phase is being carried out at the Rolls-Royce University Technology Centre facilities at the University of Sheffield and at its Derby testing facilities.



Spanish low-cost carrier Vueling has applied special markings to Airbus A320-214, EC-JZQ (c/n 992) to commemorate carrying 50 million passengers. The design features a collage of photographs shaped to form the word 'Thanks'. (Eurospot)

Many Thanks

European Growth Slows

FIGURES RELEASED by Airports Council International (ACI) reveal a slowdown in passenger traffic across Europe, while air cargo fell for the eleventh consecutive month. The association recently warned of decreasing traffic levels around the EU as operators continue to struggle with the effects of the Eurozone crisis. The average passenger traffic rose by just 1% during May compared with the same period in 2011.

New Corsair Livery

French charter carrier Corsair International has unveiled its new livery on Airbus A330-243, F-HBIL (c/n 320). The airline has also changed its name from Corsairfly as part of its 'Takeoff 2012' modernisation exercise. (Gilbert Hechemia/AirlinersGallery.com)



Carlisle Development on Hold

PLANS TO introduce scheduled air services at Carlisle Airport in Cumbria, UK, have suffered another setback. The Stobart Group, which part-owns the facility, had submitted plans to build a 394,000sq ft (36,600m²) freight distribution centre and to resurface the runway to accommodate passenger and cargo flights. The development was set for discussion by Carlisle city councillors in early June – but it was withdrawn at the request of the Stobart Group following claims from council-commissioned aviation consultant Alan Stratford Associates (ASA) that scheduled services from the facility will never be viable. These findings appear to contradict a letter of intent from Aer Arann outlining plans to launch twice-daily services from Carlisle to another Stobart-owned airport, London/Southend, and a daily flight to Dublin, using a based 48-seat ATR 42. The ASA report suggests that a connec-

tion to London would attract less than 30,000 passengers per year – significantly fewer than Stobart's estimate of 35,000 rising to 70,000 within 12 years. "We see no prospects for any other routes from Carlisle to other UK or European destinations," the report said, adding that the lack of ground radar and an instrument landing system could delay flights or force cancellations and would put airlines off using the airport. ASA also noted that the planned redevelopment would cost up to £24.3 million, almost £4 million more than Stobart's estimate. The group has asked the council to postpone its review while a rebuttal is prepared. The challenge is the latest in a string of problems that have blighted the project – the plan was originally approved in 2008 only to be dropped following a public enquiry, while a second application was turned down by the Court of Appeal in 2009.

easyJet Marks Maltese Success

BRITISH LOW-COST carrier easyJet recently celebrated completion of the 50th heavy maintenance check by SR Technics in Malta. The MRO has also completed eight end-of-lease checks for the airline with a further four expected by the end of this year. André Wall, President of SR Technics, said: "This is a proud moment for us. Less than two years ago we set up operations in Malta with a new facil-

ity and team. Today, through this high-performing team's dedication to achieving best-in-class quality and reliability, we have delivered all 50 aircraft on time, a huge achievement. The team has also been able to reduce the turnaround time for heavy maintenance checks from 14 to ten days, bringing about increased operational efficiency for each aircraft for easyJet. It's results like these that show why we chose Malta to be our centre of excellence for narrowbody aircraft." Warwick Brady, easyJet's Chief Operations Officer, added: "This is a wonderful milestone we are celebrating with SR Technics. The redelivery of the 50th aircraft is testament to the hard work and dedication of the skilled workforce in Malta." The ceremony to mark redelivery of the 50th aircraft, an Airbus A319, was held at SR Technics' two-bay hangar at Safi Aviation Park. (Photo easyJet)



Blast from the Past



Mistral Air of Italy recently took delivery of its sixth Boeing 737-348, EI-BUE (c/n 23810). Ironically, despite having served five different operators around Europe, the aircraft has reverted back to the registration it originally wore when it was delivered new to Aer Lingus in 1987. (Javier Rodriguez)

Lufthansa Shifts Capacity

GERMAN NATIONAL carrier Lufthansa has confirmed that it has been forced to move its Cape Town, South Africa, service to Munich from Frankfurt because of the latter's recently-imposed ban on night flights (see *Airliner World*, December 2011). The ban, which applies from 11pm, offers no leeway for delayed flights and has resulted in 10,000 Lufthansa passengers being stranded overnight in Frankfurt since it was introduced. The carrier has already reduced the number of evening departures from the city as part of its current summer schedule and will reduce them further this coming winter.

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Ruslan Set for Return?

MIKHAIL POGOSYAN, President of Russia's United Aircraft Corporation (UAC), has suggested that the company intends to re-launch production of the Antonov An-124 Ruslan heavy lift transporter. "We believe the current market

requires at least 75 An-124s to be modernised and repaired by 2030. The production forecast for 2012 to 2030 is 40-50 jets," Pogosyan said, noting that 35-40% of these are owned by the Russian Ministry of Defence, while the Antonov Design

Bureau, Polet Airlines and Volga-Dnepr are the largest civilian operators of the type.

A final decision on the resumption of manufacturing is due soon, with assembly expected to be completed by the Ulyanovsk aviation plant.

Production of the freighter ceased in 2004, though Volga-Dnepr, the Emergencies Ministry and the Russian Air Force have all expressed an interest in acquiring new examples (see *Airliner World*, June 2012). (Photo Ton Jochems)

Aeroflot Plans Consolidation

AEROFLOT HAS announced plans to create a regional subsidiary to operate in Russia's Far East. The new entity, which is expected to take between 12 and 18 months to establish, will be formed through the merger of wholly-owned Vladivostok Avia and SAT Airlines. Aeroflot CEO Vitaly Saveliev confirmed that the carrier will be a joint venture between the regional governments and the Russian national carrier, adding that it will acquire up to 15 new-build aircraft though it has not yet selected a type. Aeroflot, which assumed control of five state-owned airlines late last year, is also reportedly planning to acquire Krasnodar-based Kuban Airlines.

First 767 for UTair

UTAIR TOOK delivery of the first of an eventual eight Boeing 767-200ER wide-body jets on July 11. The aircraft, which is configured with 170 seats in a two-class layout, will be used on routes from Moscow to western Siberia, while later examples will be used to launch

new services to the Russian Far East. The first example, VP-BAG (c/n 30435), was previously operated by US carrier United Airlines and is one of three expected to join UTair this year; the remaining examples are due to follow in 2013.

Armavia Snubs Superjet

ARMENIAN NATIONAL carrier Armavia has confirmed it will not be acquiring the second Sukhoi Superjet 100 which was expected to join the operator imminently. The airline, which was launch customer for the type, received its first example in April 2011.

A spokesman said: "The Armavia management attending the Farnborough International Airshow met representa-

tives of the Airbus and Boeing companies on the show's first day," adding that the operator was intending to purchase aircraft from both manufacturers and had no intention of acquiring any further Sukhoi-built airliners.

The twinjet has been plagued by reliability issues since entering service while one of the prototypes was lost in a fatal accident in Indonesia on May 9.

Transaero Firms up Orders

RUSSIA'S SECOND-largest carrier, Transaero, has signed a purchase agreement with Airbus for four A380 Superjumbos. The deal, valued at \$1.7 billion based on list prices, follows an accord signed in October last year and will make the airline the first operator of the type in the region. The aircraft is expected to accommodate up to 700 passengers in a three-class layout and will be used on long-range, high-density routes from Moscow.

"Our airline, with its strong innovation culture, will be the first in Russia to fly the A380, the world's largest passenger aircraft," remarked Transaero CEO Olga Pleshakova. "I am sure that the operation of the A380 will stimulate the development of Russia's aviation sector, in particular its ground infrastructure. In addition, our passengers will benefit from the completely new air travel experience the A380 offers with its spacious, comfortable cabin for their long-haul flights."

The carrier has also firmed-up a \$212 million order for six Sukhoi Superjet 100s, with options for a further ten. Mikhail Pogosyan, President of the United Aircraft Corporation, commented: "Transaero is among the 50 largest carriers in the world and ranks in the top five safest European airlines. Its selection marks the recognition of our product's high quality and superior operating ability. I am convinced the Superjet will become an efficient tool that will be used by the airline in implementing its regional services development plan."

The first, 90-seat SSJ100 is due for delivery in 2015.

Russian Visitor

Pictured at London/Heathrow on July 10 was Russian Government-operated Ilyushin Il-62M, RA-86572 (c/n 3154624). The jet stayed in the UK for several days before departing for Washington DC. (Nik French)



Turkish Delight

Polet Flight's Antonov An-148-100E, RA-61709 (c/n 41-04), was noted at Antalya, Turkey in late June. The aircraft is one of two delivered to the carrier in late 2011. (Eurosport)



FL Technics Lands Ural Deal

URAL AIRLINES has reached an agreement with FL Technics to provide line maintenance for its fleet of Airbus A320s and A321s. Under the new deal, the Lithuanian MRO will carry out daily and weekly checks at its Krasnodar station as well as providing on-call support for the carrier's aircraft.

"The agreement with FL Technics plays an important role for the development

of [our] air traffic from Krasnodar Airport," said Ural Airlines Quality Director Alexey Fomin. "Collaboration with an EASA-certified European line maintenance partner will make it possible to maintain a high level of airworthiness of the aircraft that perform flights from this airport. This is particularly important during the intensive summer period."

FL Technics CEO Jonas Butautis added: "Russia is certainly one of the regions with the most potential for MRO organisations. With many years of experience working with local companies, we have exceptional understanding of the market players' needs and requirements. The co-operation with Ural proves the trust and reliance of our Russian partners in the services we provide."

Russian Charters

TOUR OPERATOR TUI Russia, part of the German-based TUI Group, has officially launched charter flights from Moscow/Domodedovo to destinations

around the Mediterranean. The services are flown by partner airline Kolavia under the guise of MetroJet – TUI Russia has signed a three-year agree-

ment with the carrier which has spent \$1 million on rebranding including new crew uniforms and a hybrid livery on its Airbus A321s. (Photo Karl Nixon)



Belarusian Movie Star

This Belarusian Mil Mi-26T, EW-260TF (c/n 34001212465), was an unusual visitor to Budaors, Hungary, in late June. The helicopter received a temporary camouflage paint scheme ahead of filming for the new movie *Die Hard 5*. (Tamás Martenyi)



Record-Breaking Domodedovo

MOSCOW'S DOMODEDOVO Airport handled a record 2.75 million passengers during June 2012, an increase of more than 6.2% over the same period last year. The facility cemented its position as the city's busiest hub when it served over 114,500 travellers on June 30 alone, surpassing its own record for the number of passengers handled in a single day by over 5,000. The June performance is the highlight of a very busy year for the airport, which has seen an increase in domestic traffic of 12.8% for the first half of 2012 compared with 2011, while international traffic rose by 8.2% in the same period.

in brief

The **Chkalov Tashkent Aircraft Production Corporation (TAPCO)** delivered its final Ilyushin Il-114 turboprop to Uzbekistan Airways in late June, bringing to an end 70 years of aircraft production. The plant, which attributes the closure to financial difficulties and a downturn in demand, will now be used to make car components, household products, building structures and farm machinery.

Russian operator **KrasAvia** has acquired three Let 410 Turbolets for use on its regional network. The Krasnoyarsk-based carrier was expected to introduce the type into scheduled service in early August.

Aeroflot has taken delivery of a Thales-built Sukhoi Superjet 100 full flight simulator. Installation of the system, which was supplied by Sukhoi as part of the flag carrier's 30-aircraft order, is due for completion in late September.

Kazakh carrier **Air Astana** received the award for 'Best Airline in Central Asia' at the World Airline Awards held during the 2012 Farnborough International Airshow. The airline, a joint venture between Kazakhstan's national wealth fund Samruk Kazyna and BAE Systems, beat off competition from Indigo Airlines and Jet Airways, which ranked second and third respectively. (Photo Air Astana)



Kuban Airlines has confirmed plans to retire its remaining Yakovlev Yak-42s this autumn as part of an ongoing fleet renewal programme. The carrier, which also operates Boeing 737s, is replacing the ageing jets with Western-built aircraft.

Skyworld Aviation has completed the sale of two former Viking Hellas Airlines Airbus A320s to Ukrainian operator **Aviatrans**. The first of the two IAE V2500-powered jets, EI-EEY (c/n 393), was delivered in late May with EI-EEY (c/n 414) following in early June.

Moscow/Vnukovo Airport is reportedly considering a £140 million loan to complete the construction of its new terminal building – which, on its expected completion later this year, will increase capacity to 20 million passengers per year.

Aviation Capital Services, the specialised leasing arm of the Russian Technologies State Corporation, placed an order with IRKUT for 35 MC-21 narrow-body jets in late June. The deal is valued at \$2.32 billion based on list prices, with deliveries expected to commence in 2022.

SAA Reveals Special Colours



JUST IN time for the summer Olympic Games, South African Airways (SAA) revealed a fully-branded Airbus A340-300 that flew 'Team South Africa' and officials to London. The design was cre-

ated by Adri le Roux, a first-year design student at Stellenbosch University. "As South Africa's national airline, we are proud and happy to be able to support our athletes in this manner,"

said SAA's CEO, Siza Mzimela. The carrier had announced a competition challenging South Africans aged between 13 and 21 to "design an iconic logo which captures the spirit of South

Africa". The judging criteria included simplicity and longevity of the design, and how it would complement SAA's internationally recognised branding. (Photo Dave Glendinning)

More Growth in Dubai

PASSENGER NUMBERS at Dubai International Airport increased 10.4% year-on-year in May. Passenger traffic reached 4,388,614 compared with 3,976,633 in the same month in 2011. Strong performance in the first five months of 2012 has propelled the year-to-date traffic to 23,216,893, an increase of 13.2% over 2011.

Flights to countries of the Arab Gulf Co-operation Council (AGCC) recorded the largest increase in total passenger numbers in May (up 105,052), followed by Africa (up 61,306), Western Europe (up 57,602) and the Indian subcontinent (up 55,330).

Aircraft movements for the month totalled 28,304, an increase of 5%, with a yearly increase of 7.2%. The airport also handled 187,638 tonnes of air freight in May, a drop of 0.1% – but year-to-date freight volume has reached 891,464 tonnes, up 1.4%.

Qatar Airways is 'Best Airline In The World'



Qatar Airways is the first commercial carrier to have the new wingtip 'Sharklets' fitted on one of its aircraft – Airbus A320-232(WL), F-WWBG/A7-AHV (c/n 5182). (Yvan Panas)

AT THE annual Skytrax World Airline Awards, Qatar Airways was presented with the 'World's Best Airline' award for the second year running. It was also named 'Best Airline in the Middle East' (for the seventh consecutive year) and took the award for 'Best Airline Staff Service in the Middle East'.

The awards, conducted by the Skytrax global aviation research organisation, polled over 18 million business and leisure air travellers from more than 100 countries. Qatar Airways' CEO Akbar Al Baker, said: "I'm extremely proud of the adulation given once again by the very people who fly – the travelling public – for their sup-

port and faith in us." Meanwhile, the carrier has ordered a new head-up display (HUD) to be installed on its entire new fleet of Airbus A350 XWBs and A380s. The Thales dual HUD system gives pilots much greater visibility throughout all phases of flight, especially for take off and landing.

Air Seychelles Adds A330-200



AIR SEYCHELLES has acquired its first Airbus A330-200. The aircraft made its debut on a scheduled flight from Abu Dhabi, arriving at Seychelles International Airport on July 5. After some minor modification work it then returned to service five days later.

Formerly operated by Indian carrier Jet Airways, it has been named *Aldabra* in honour of Aldabra Island, a UNESCO World Heritage Site and one of the Seychelles' most remote spots. (Photo Richard Maslen)

Arkia Embraer

Israeli charter carrier Arkia Airlines operates its Embraer 190-200IGW, 4X-EMA (c/n 0172) – delivered in October 2008 – to holiday destinations such as Heraklion in Greece. (Mark Stanton)



MEA Joins SkyTeam

MIDDLE EAST Airlines (MEA) has become the latest member of the SkyTeam alliance – the second airline from the Middle East after Saudia, which joined in May (see August issue).

MEA's acceptance process has taken several years. Although formally accepted as a future member in early 2011, the airline had been linked to possible associate membership as long ago as 2003. However, between 2004 and 2011, progress stalled until the final acceptance process, sponsored by Air France, began last year.

Kotaka International Wins Marketing Award

KOTOKA INTERNATIONAL Airport, Accra, is the winner of the Routes Africa Airport Marketing Awards for 2012. The airport has achieved a huge increase in passenger traffic (from 1.4 million in 2010 to 1.8 million in 2011) and works closely with its stakeholders – including its government and tourism authority.

African easyJet?

A NEW African low-cost carrier – FastJet – is planning to start operations with Airbus A319s as early as October this year. Formed by Rubicon Diversified Investments, it will operate under a brand licence agreement with easyGroup Holdings Limited and Sir Stelios Haji-Ioannou, the founder of easyJet.

Rubicon CEO Ed Winter, said: "The decision to launch FastJet with the Airbus A319 enables us to expand rapidly with each aircraft potentially carrying around 250,000 passengers a year." He added that FastJet plans to add at least five leased aircraft to the fleet within six months.

Etihad and Virgin Australia

ABU DHABI-based Etihad Airways has been given permission by the Australian government to double its shareholding in Virgin Australia to 10%.

"The strategic partnership has already delivered significant revenues to each airline. It is expected that the equity stake in Virgin Australia will lead to further revenue generating opportunities," a spokesperson for Etihad said.

New Saudi Carrier

QATAR AIRWAYS has expressed interest in launching an airline registered in Saudi Arabia. Akbar Al Baker, Qatar's CEO, has held talks with His Royal Highness Prince Fahd bin Abdullah Al Saud to discuss opportunities arising from the country's newly-launched aviation liberalisation policy. During the meeting, Al Baker expressed concern over excessive fuel charges in Saudi Arabia and its government's policy of controlling domestic air fares which, he said, were not in the interests of the travelling public nor airline operators.

Air Zimbabwe Suspends Flights

LESS THAN two months after their resumption, Air Zimbabwe has again suspended domestic services. The carrier stopped services to Harare, Bulawayo and Victoria Falls after grounding one of its Boeing 737s, which had been flying the routes, for a C-check and corrosion inspection. It had previously resumed operations in early May – after its fleet had remained on the ground for almost four months, citing debt issues and industrial action by key personnel including pilots and engineers.

in brief

For a record eighth consecutive year, **Emirates Airline's** onboard 'ice' (information, communications and entertainment) system has been awarded the 'World's Best Airline Inflight Entertainment' award at the Skytrax World Airline Awards. Ice offers a choice of over 1,400 channels of entertainment; including up to 300 films from around the world, hundreds of TV choices and thousands of music tracks.

Abu Dhabi-based international luxury executive flight services company **Royal Jet** has announced new pricing packages for its fixed-base operation (FBO) facility in Abu Dhabi that, it claims, make it one of the most competitive in the region. It includes an additional two aircraft weight classes and a reduction of up to 75% on the technical stop (refuelling) rates.

Afriqiyah Airways of Libya has resumed its three times a week service from Tripoli to Gatwick Airport, London (halted by the troubles in the country), using a 160-seat Airbus A320. Khaled Lazumi, General Manager for the carrier in the UK, said: "It's been a very difficult year for us all, but this day marks the dawn of a new relationship between the new Free Libya and the UK."

South African no-frills airline **kulula.com** has installed an IT platform from Sabre Airline Solutions, which currently works on behalf of more than 380 airlines worldwide. The new infrastructure will help improve the quality of IT services and introduce customers to an array of new tools and benefits.

Abu Dhabi Airports Company (ADAC) and the joint venture of TAV, CCC and Arabtec have signed a \$2.94 billion contract for the construction of the Midfield Terminal Building at **Abu Dhabi International Airport**, with opening planned in 2017. Construction of the 7,535,000sq ft (700,000m²) terminal building will commence in the third quarter of this year. (Photo ADAC)



FlyCongo, a new airline based in the Democratic Republic of the Congo, began services to Johannesburg at the end of June with a twice-weekly Boeing 767-200ER Kinshasa-Lubumbashi-Johannesburg connection. FlyCongo was formed in March after the suspension of Hewa Bora Airways following a series of fatal accidents. The new airline aims to expand and deliver major improvements in air safety in the central African country.

Jetstream in Angola



AirJet has taken delivery of the first of two BAE Systems Jetstream 41s for passenger operations in Angola. The aircraft, D2-ENG (c/n 41095), is pictured in the company's smart livery awaiting delivery at Germiston's Rand Airport, South Africa, at the end of June. (Morné Booij-Liewes)

First LAN Boeing 787



THE FIRST Boeing 787 Dreamliner for LAN Airlines has left the paint shop at the manufacturer's Everett, Washington facility in the carrier's full livery. The aircraft will be delivered before the end

of the year, and LAN will become the first to operate the aircraft in Latin America. Internal configuration will include 217 Economy Class seats and 30 in Premium Business Class.

Initial destinations will be from Santiago, Chile to Buenos Aires, Argentina; Lima, Peru; Los Angeles, California, USA; Madrid, Spain and Frankfurt, Germany. (Photo Boeing)

Boeing 717s to be Leased

LOW-COST carrier Southwest Airlines will spend about \$100 million converting all 88 of its former AirTran Airways' Boeing 717s prior to their sub-lease to Delta Air Lines. The money will be spent on reconfiguring the interiors and painting the exteriors. Southwest's Chairman, President and CEO Gary Kelly insists the expense is justified. "You might think of it as a volume discount we were willing to offer to induce our sublease customer to take those aircraft," he said.

The company's CFO Laura Wright added that it expects a \$200 million boost in annual pre-tax income from replacing AirTran's 717 services with 737s that accommodate 26 more seats at roughly the same trip cost.

The carrier has signed a deal with Delta that will add three of the 717s to its fleet each month, starting in August 2013.

New Terminal Awaits Spring Opening

THE FIRST phase of the new Tom Bradley International Terminal (TBIT) at Los Angeles Airport will be opened in spring 2013. This will include both the Great Hall and the new west side boarding gates. Phase Two's East Gates, will be completed by the end of 2013. Adding an area of 24 million sq ft (115,120m²) will double the size of the existing facility and will cost \$1.545 billion.

Shorts in Alaska

ERA Alaska has been created by amalgamating the services of several smaller carriers within the state. These include: ERA Aviation, Hagelund, Frontier Flying Service, and Arctic Circle Air. One of the Short 330s used by Arctic Circle Air, N168LM, (SH3104), now carries ERA Alaska and very large 'Cargo Solution' titles. (Joe G Walker)



New Cargo Colours

As a result of South American carriers LAN and TAM merging and the creation of the LATAM group, LAN subsidiary ABSA Cargo will now operate under 'TAM Cargo' titles. The first aircraft in the new colours is Boeing 767-316FER, PR-ADY (c/n 32573), which was delivered to Rio de Janeiro International Airport in late July. (Daniel R Carneiro)



AeroSur Loses AOC

FOLLOWING ITS grounding in May, the Bolivian authorities have now withdrawn Aerosur's Air Operator's Certificate (AOC). The financially troubled carrier had begun to reduce its services and fleet from 11 aircraft to just one from February this year. Four rescue plans had been presented by a pair of international partners.

Aeromexico Goes For The MAX

MEXICO'S LARGEST airline, Aeromexico, has made a commitment to purchase up to 100 single- and twin-aisle aircraft – a combination of 90 Boeing 737 MAX 8s and 9s, plus ten 787 Dreamliners – the largest investment programme for a Mexican airline. When finalised, the order will be worth \$10.8 billion at list prices.



AA Flies to Quito

DEVELOPMENT OF the new \$460 million Quito International Airport in Ecuador reached an important milestone in July with the successful arrival of an American Airlines Boeing 757-200. Passengers on the short flight from the existing airport to the new facility included Augusto Barrera, Mayor of Quito, as well as members of the project team among them staff from the construction company Mott MacDonald.

This was the first commercial aircraft to land at the new airport as part of the operational preparations and follows the completion of the airfield in April 2012. Positioned 8,500ft (2,591m) above sea level, Quito International will replace the city's Mariscal Sucre International Airport which has no spare capacity and cannot be expanded due to its inner city location. (Photo Quito Airport)

New Mining Flights



EVERY TUESDAY, the Sinami, Sindicato Interempresa de Trabajadores de Montaje Industrial (inter-company industrial support workers union) charters an Aerovías DAP British Aerospace BAe 146-200, CC-ACO (c/n E2094), on behalf of its affiliates, to fly

from Santiago/Arturo Merino Benítez International Airport to Calama's El Loa – in the heart of the northern Chilean mining zone. The aircraft carries Sinami Mineral Airways titles for the flights. The company is planning to expand services from various sea-level airports

in northern Chile, such as Iquique, to mining airfields including Coposa in Collahuasi, enabling Sinami workers to fly right from their domestic bases to the mines – some of which are 12,468ft (3,800m) above sea level. (Photo Alvaro Romero)

Fiftieth 747-400BCF Delivered

EVERGREEN INTERNATIONAL Airlines and Taikoo Aircraft Engineering (TAECO) have celebrated the delivery of the 50th 747-400 Boeing Converted Freighter (BCF). It is the first to enter the Evergreen fleet and the 40th conversion completed by TAECO.

"This is a milestone that few other large freighter conversion programmes have attained," said Dan da Silva, Vice President, Freighter Conversions for Boeing.

Modifications include a side cargo door, a new, strengthened main-deck floor, full main-deck lining installation, provisions for a new cargo handling system and complete revision of the aircraft systems. Boeing manages the overall conversion, including engineering and materials, and TAECO converts the airframe at its Xiamen facility under contract with Boeing. Ten conversions have been completed by customers using Boeing kits.

PLUNA Suspends Operations

GOVERNMENT-OWNED PLUNA Líneas Aéreas Uruguayas has suspended all flights indefinitely. The carrier's management said the company's financial situation had made it impossible to secure conditions for adequate operations. The Uruguayan Council of Ministers has subsequently prepared an emergency law to set conditions for private investors to partner with the federal government to establish a new Uruguayan flag carrier.

in brief

Officials at **Boston Logan International Airport** have brought into operation the latest in next-generation digital signage, the Tensator Virtual Assistant. The holographic images of 'helpers' inform and guide passengers quickly and efficiently through the international Terminal E security checkpoint.

Latin American airlines **Avianca-Taca** and **Copa Airlines** (plus subsidiary Copa Colombia) have become members of the Star Alliance. The addition of the carriers "strengthens our presence in the rapidly growing Latin American market," said Star CEO Mark Schwab. "Our customers now enjoy increased connectivity across the Americas by connecting through five new Star Alliance hubs right in the middle of the American continent."

An impressive revenue performance has resulted in a second quarter income of \$228 million for **Southwest Airlines**. This is an increase of 41.6% over last year. The low-cost carrier's second-quarter revenue rose 11.6% year-over-year to \$4.62 billion. The easing burden from lower oil prices in recent months resulted in a fuel expense increase of just 3.3% year on year.

Brazilian low-cost carrier **GOL** has started services to Miami International Airport (MIA) with a weekly charter passenger flight from São Paulo, Brazil using Boeing 737-800s. The airline has applied to the US Department of Transportation for scheduled route authority and is expected to begin daily services after it has federal approval. The inaugural flight to MIA was welcomed with a water cannon salute from Miami-Dade Fire Rescue. (Photo MIA)



GKN Aerospace has been awarded a contract for the design, development and production of cockpit and passenger cabin windows for the Bombardier Global 7000 and Global 8000 business jets. Design, development and production will take place at the GKN Aerospace facility in Garden Grove, California, USA with initial test deliveries taking place in 2013.

Low-cost carrier **JetBlue** has announced an agreement for **Aer Lingus** to move its New York flight operations from Terminal 4 at John F Kennedy International Airport to JetBlue's Terminal 5 in early 2013. The Irish carrier will become the first foreign airline to move to Terminal 5, offering customers a connection to one of JetBlue's many destinations across the Americas.



THAI Smile Launched

THAI AIRWAYS International's new light premium regional subsidiary, THAI Smile took delivery of its initial Airbus A320-232, HS-TXA (c/n 5198) on June 28 in Hamburg, Germany. The jet is configured to seat 174 passengers, with the first five rows designated for 'Smile Plus,' a short-haul Business Class incorporating extra seat pitch and an enhanced onboard product. The carrier has 11 A320s on order, the last of which is due to

arrive in mid-2015. The first six airframes are being leased from SMBC Aviation Capital, while the remaining five are to be purchased directly from Airbus. These will be equipped with 'Sharklet' wing tip devices, which will deliver 3.5% in fuel savings. Speaking at the handover, THAI Smile's Managing Director, Mr Woranate Laprabang said: "We are delighted to take delivery of our brand new A320.

Thanks to the aircraft's cabin comfort and operational reliability, THAI Smile will be able to serve the market gap between low-cost and full service airlines." Nine days later the A320 flew the company's inaugural flight TG750 from Bangkok/Suvarnabhumi to Macau with a twice-daily rotation. The carrier plans to launch several domestic rotations next, followed by more international destinations. (Gerd Beilfuss/AirlinersGallery.com)



Indian Air Force Globex

Passing through Shannon in late June was this Bombardier Global Express 5000, C-GHVB (c/n 9424) which is destined for the Indian Air Force. It was flying to Tel Aviv for modifications before being handed over to the customer. (Paul Morris)

Malaysian Airlines Launches Superjumbo Services

MALAYSIA AIRLINES celebrated the launch of its first Airbus A380 non-stop service between Kuala Lumpur and London/Heathrow on July 3. It was flown by the carrier's first Superjumbo to be delivered, 9M-MNA (c/n 078) which has been painted in a special livery to mark the type's introduction. On board the inaugural flight was Malaysia Airlines' Group CEO, Ahmad Jauhari Yahya who was joined by other Malaysian dignitaries. Speaking at the event, which was held in the company's recently refurbished Golden Lounge in Terminal 4, the CEO said: "The A380 showcases our latest premium offering and it was imperative that our first A380 was inaugurated on our prestigious London rotation, a route we have been flying since 1974. The A380 is our latest flagship offering new levels of comfort, luxury and convenience for long-haul travel and we look forward to delivering great Malaysian hospitality to our UK guests."

Indian Success

JET AIRWAYS is bucking the trend in the Indian sub-continent aviation sector by reporting an operating profit of INR 11,686 million (£135 million) despite the high price of aviation fuel and depreciation of the rupee. International traffic grew by 26% during the fourth quarter compared to the same period last year, generating 56% of total revenues. While domestic traffic also grew by an impressive 22%. The carrier says that this success is partly due to closer monitoring of its costs, as well as a network rationalisation of dropping unprofitable routes. The company's Middle Eastern routes continue to be a primary driver for fiscal year 2013, with the airline already increasing frequencies between Mumbai and Dubai by launching a fourth daily service. It has also added a second frequency to its four times per week link to Kuwait. Jet Airways has also consolidated its low-cost product under the JetKonnnect brand.

Hainan Announces First Dreamliner Route

HAIKOU-BASED Hainan Airlines has said it is planning to operate its first, yet-to-be-delivered Boeing 787 on its new Beijing to Chicago/O'Hare link which is being launched next year. This will be the carrier's second North American route joining its Beijing to Seattle service which started in June 2008. Hainan signed a contract for

eight Dreamliners in November 2005 and added two further aircraft in January 2007, with deliveries originally set to start in December 2011; however well-publicised production problems have led to further delays. Hainan Airlines' Chairman, Chen Feng was quoted earlier this year as suggesting the company had considered

exchanging its Dreamliners for 747-8s instead, due to the continuous delivery delays. The carrier has issued a statement to clarify the situation: "We are indeed considering the 747-8 now, as the continuous delivery delays of the 787 have affected our operations. But we will not be cancelling any of our Dreamliner orders."

NCA's Third Boeing 747-8 Freighter



Seen departing on a pre-delivery flight test from Paine Field near Everett, Washington is Nippon Cargo Airlines' third Boeing 747-8KZF, JA13KZ (c/n 36138). The carrier has 14 examples on order and is introducing this new livery especially for the type. (Nick Deary/AirlinersGallery.com)

Lynden PNG Registers Second Hercules



Lynden Air Cargo (PNG) has registered this second Lockheed L-382 Hercules, P2-LAD (c/n 4698) on the Papua New Guinea civil register. The pair, P2-LAC (c/n 4676) being the other, are flying heavy and outsized cargo throughout the country from its base at Lae Nadzab Airport. (Paul Howard)

New Terminal for Haikou Meilan International

AÉROPORTS DE Paris Ingénierie (ADPI), a subsidiary of Aéroports de Paris, has been declared the winner of an international competition to design a new terminal at Haikou Meilan airport on Hainan Island in southern China. The facility's operator Hainan Meilan International Airport Company (part of the HNA Group) chose

ADPI over other competing design agencies including Landrum & Brown, East China Architectural Design and Research Institute and BIAD, the largest design office in China.

The facility's current terminal handled almost 9 million passengers in 2011, just 3 million short of its total capacity.

The new Terminal 2 will be located opposite the existing facility and will be operational by 2020 when it will be handling 18 million passengers per year. The design submissions also included the development of an airport Master Plan which includes a third terminal, bringing overall capacity up to 62 million by 2040.

Japanese Fire Fighting

THE TOKYO Fire Department has placed an order for a single Eurocopter EC225 to add to its growing fleet of fire-fighting, emergency medical services and search & rescue helicopters. This latest deal follows the purchase of the Fire Department's first EC225 in December

after a review of the devastating Great East Japan earthquake and tsunami on March 11, 2011.

The European manufacturer has been the sole helicopter supplier to the Fire Department since 1967, when it delivered a SA3160 Alouette III, and has since then

provided four Dauphins and three Super Pumas. The EC225 is set to become the main medium-heavy lift helicopter in Japan, with the company securing five orders in the last year in addition to those for the Tokyo Fire Department.

(Photo Eurocopter)



Cobham operates from Rough Airstrips

ADELAIDE-BASED Cobham Aviation Services Australia has opened a large number of gravel air strips around the country to commercial passenger jets for the first time, delivering what the company believes will be huge benefits to mining and energy firms as well as fly-in fly-out (FIFO) operations. The latter makes it possible to employ people in remote areas – rather than relocating workers and their families.

Cobham has launched flights to rough

airstrips following the modification of several of its British Aerospace 146 aircraft with gravel kits that protect the airframe and undercarriage from damage during take-offs and landings. The kits were put through 18 months of trials prior to gaining Australian Civil Aviation Safety Authority approval. Prior to this innovation, airlines were forced to use turboprop aircraft and were limited to carrying just 50 passengers.

So far two 71-seat 146-100s have been

modified and Cobham is in the process converting more of its fleet. The work is being carried out at the company's Adelaide and Perth facilities and requires the application of the approved BAE Systems' airframe protection kit, which includes specialized rubber paint to protect the underside of the fuselage. A nosewheel stone deflector and Kevlar undercarriage shields also protect the landing gear from dislodged gravel and debris.

in brief

Korean Air has signed a firm order for two more Boeing 777-300ERs in a deal valued at \$560 million at list prices. The South Korean flag-carrier already operates four 777-300s and nine -300ERs and has a further four on order. These last two aircraft are due to be delivered in late 2014.

Air Tahiti Nui has signed a contract with SR Technics for the completion of cabin modifications on its Airbus A340-300s. The work involves converting the existing three-class cabin configuration into a two-class layout, with the replacement of all seats and the installation of a state-of-the-art in-flight entertainment (IFE) system. The modifications will be completed in 2013.



Singapore's Changi International Airport is celebrating the completion of four years' work on upgrading the facilities of its oldest terminal. Started in May 2008, the \$5500 million project has rejuvenated Terminal 1. A favourite spot for many is the viewing gallery which has been extended and features a 'floating' floor extending beyond the building's façade.

(Photo Changi Airport Group)

Cebu Pacific Air, the Philippines' largest carrier, will be installing OnAir internet services on its fleet of Airbus A330s starting in mid-2013, in time for the airline's initial deployment of long-haul flights. This will enable its passengers to access the internet during flights and make calls using Voice over Internet Protocol applications on their Wi-Fi enabled personal electronic devices. The company has also taken an option to install Wi-Fi on its A320s if the idea proves to be popular with passengers.

Saipan Air has indefinitely postponed its inaugural flight, originally set for July 1, due to problems in obtaining an aircraft. The deal to lease a jet from Swift Air fell through and this left the carrier with little time to organise a suitable replacement and secure the necessary government licences for it to fly to Japan and China.

AirAsia and **GE Aviation** are working together to design and deploy International Civil Aviation Organisation (ICAO) Required Navigation Performance, Authorisation Required (RNP, AR) flight paths at 15 airports in Malaysia. The project will streamline air traffic management leading to more direct approach routes and fuel savings. Work has started at Kuching and Penang International Airports and the network will be completed by 2016.



Retro Jets

Many airlines have turned to special retro liveries to commemorate landmark anniversaries. Here's a selection of some of the more recent examples – many more can be seen in our annual special, *Airliner Classics*.

As part of TAM's 'Vintage' campaign, the Brazilian operator repainted two of its Airbus A319s, including PR-MBW (c/n 3710), in retro liveries. The theme is continued inside the cabin with crews on each jet wearing period uniforms. (Airteamimages.com/JB Daedalus)

Aerpostal's McDonnell Douglas DC-9-32, YV141T (c/n 47535), wears the Venezuelan airline's original livery to commemorate 80 years of service. The aircraft also carries special '1929 - 2009' and '80 Años' titles. (Airteamimages.com/Ivan P. Nesbit [THUD])



Irish carrier Aer Lingus celebrated its 75th anniversary by applying its late 1960s-era livery to Airbus A320-214, EI-DVM (c/n 4634). (Airteamimages.com/Steve Flint)



Dniproavia's Embraer 145LR, UR-DPA (c/n 145330), carries special markings to celebrate the 80th anniversary of the Ukrainian airline's predecessor, Dnipropetrovsk Aviation Enterprise. (Airteamimages.com/Danish Aviation Photo)



Former Hungarian national carrier Malev applied a retro livery to Bombardier Dash 8-Q400, HA-LQD (c/n 4063), in 2011 to commemorate its 65th anniversary. Sadly, the airline ceased operating barely a year later. (Victor Lazlo)



Czech Airlines' Boeing 737-55S, OK-XGC (c/n 26541), wears the 1960s-vintage colour scheme originally carried by the operator's first jet aircraft, the Tupolev Tu-104. (Airteamimages.com/Alex Filippopoulos)

Garuda Indonesia has applied vintage liveries to two of its Boeing 737-86Ns; PK-GFM (c/n 39920) here carries 'brand logo 1961-1969', while sistership, PK-GFN (c/n 38033) wears the colour scheme adopted between 1969 and 1985. (Airteamimages.com/TEK)



Old and New – All Nippon Airlines marked its 60th anniversary by repainting Boeing 767-381, JA602A (c/n 27944) in its 1960s-vintage 'Mohican' colour scheme. A 777 in the carrier's current livery provides a fitting backdrop. (Airteamimages.com/Bailey)

Chinese Turboprop Revealed



THE HARBIN Aircar Y12F is a development of the earlier Y12, but is fitted with a retractable undercarriage and turboprop engines. It can accommodate

19 passengers plus bulk cargo or carry freight in three LD3 containers. With extra fuel tanks, it can be used for longer flights such as VIP, maritime surveil-

lance, aerial telemetry and photography, remote sensing, geological survey, military transportation and parachuting. The Aircar took to the air for the

first time in December 2009 and certification from the Civil Aviation Administration of China (CAAC) is expected to be this year. (Photo Harbin)

Chinese Bid for Hawker Beechcraft

AEROSPACE MANUFACTURER Superior Aviation Beijing of China has made a bid to acquire Hawker Beechcraft for \$1.79 billion. The transaction will not include the Hawker Beechcraft Defense Company, which would remain a separate entity. "Superior has had a long-standing interest in our commercial aircraft

business, having first approached us several years ago regarding a potential strategic partnership," said Hawker Beechcraft's CEO, Robert S. Miller. "It would also give [us] greater access to the Chinese business and general aviation marketplace, which is forecast to grow more than 10% a year for the next 10-15 years."



Airbus to Build in the US

AIRBUS IS to establish a manufacturing facility at the Brookley Aeroplex at Mobile, Alabama, to assemble and deliver A320 Family aircraft. It will be the company's first US-based production facility and will, says Airbus, create jobs and strengthen the aerospace industry in the region.

Once complete, it will assemble A319s, A320s and A321s. Construction of the facility will begin in the summer of 2013, with aircraft assembly starting two years later and first deliveries beginning in 2016. The company predicts that the facility will produce between 40 and 50 aircraft per year by 2018. (Photo Airbus)

AIRBUS DELIVERIES



Sichuan Airlines took delivery of its 16th Airbus A319-133, B-6422/D-AVYU (c/n 5208), on July 5. The aircraft is pictured at the start of its first flight from Airbus' Hamburg facility at Finkenwerder on June 25. (Kees van der Mark)

Airbus delivered the following aircraft in June:

| Aircraft | Quantity | Airline |
|--------------|-----------|---|
| A319 | 2 | Avianca Brazil, Alitalia |
| A320 | 30 | AirAsia Japan, Air Berlin, Air China, Avianca, Capital Airlines, China Eastern Airlines (2), China Southern Airlines (2), easyJet (2), Hong Kong Airlines, IndiGo, Interjet, JetBlue, Jetstar Japan, LATAM Airlines (2), Lucky Air, Lufthansa, Middle East Airlines, Peach Aviation, Shenzhen Airlines, Spirit Airlines, TAM Linhas Aereas, Thai Smile, Tiger Airlines, Virgin America, Volaris, Wizz Air |
| A321 | 9 | Air China, Asiana Airlines, China Eastern Airlines (2), Lufthansa, Royal Jordanian Airlines, Sichuan Airlines, Turkish Airlines, Vietnam Airlines |
| A330-200 | 4 | China Eastern Airlines, Hawaiian Airlines, Hong Kong Airlines, Virgin Australia |
| A330-200F | 2 | Hong Kong Airlines, Yangtze River Express Airlines |
| A330-300 | 2 | Cathay Pacific Airlines, Virgin Atlantic Airlines |
| A380-800 | 2 | Air France, Lufthansa |
| Total | 51 | |

EMBRAER DELIVERIES

| COMMERCIAL AVIATION | | | BRAZILIAN MANUFACTURER Embraer delivered 35 jets to the commercial aviation market and 20 to executive aviation customers in the second quarter of 2012. Deliveries for the first six months of the year total 56 commercial and 33 executive jets, 13 more than for the same period last year. On June 30, 2012, the firm order backlog value was \$12.9 billion – including the acquisition of five more E190s by China's Hebei Airlines which was not formally announced until July 9. |
|---------------------|----------------|------------|---|
| Type | Second Quarter | Total 2012 | |
| E170 | - | - | |
| E175 | 8 | 10 | |
| E190 | 22 | 35 | |
| E195 | 5 | 11 | EXECUTIVE AVIATION |
| Light jets | 17 | 29 | |
| Large jets | 3 | 4 | |
| TOTAL | 55 | 89 | |

TaxiBot Trials

'TAXIBOT' – A joint development between Israel Aerospace Industries (IAI), vehicle manufacturer TLD, Airbus and Lufthansa Technik's subsidiary Lufthansa LEOS – is a new tractor, controlled from the cockpit by the pilot, which can pull aircraft from the gate to the runway without using their engine power. A six-month test will start at Frankfurt Airport

in the spring of 2013 to assess the system under normal conditions. The new tractor is designed so that the aircraft's nosewheel connects to a rotating table on the TaxiBot to allow the pilot to control the aircraft using the cockpit steering systems just as the flightdeck crew would if the aircraft were moving under its own engine power.

ecoDemonstrator Ready For Flight



BOEING HAS completed the assembly of a special Next-Generation 737-800 for American Airlines. It will be used as a flying test bed for validating what the company calls "environmentally progressive" technologies. Known

as the 'ecoDemonstrator', it was fitted with test equipment before beginning a month of intense flight testing in Montana.

The 2012 ecoDemonstrator programme is a partnership between

Boeing, American Airlines and the US Federal Aviation Administration. Trials will include improvements to wing and engine efficiency as well as fuel-saving flight trajectory methods. (Photo Boeing)

First A350 at Toulouse

AIRBUS HAS delivered the front fuselage for the first flyable A350 XWB (c/n 001) to the final assembly line in Toulouse, France. The 69ft (21m)-long section, already fitted with internal systems, was flown in from the com-

pany's site in Saint-Nazaire aboard an A300-600ST Beluga. The fuselage section will be mounted in a giant assembly jig ready to be joined with the centre and aft fuselage sections over the summer period.

BOEING DELIVERIES



The second Boeing P-8I for the Indian Navy completed its initial flight from Renton on July 12. A derivative of the Next-Generation 737-800, it is the second of eight long-range maritime reconnaissance and anti-submarine warfare aircraft Boeing is building for India. (Boeing)

Boeing delivered the following aircraft in June:

| | | |
|--------------|-----------|---|
| B737-700 | 1 | GECAS |
| B737-800 | 30 | ACG (3), Air Berlin, Air China, Air Lease Corporation, American Airlines (2), Avolon (2), BBAM, China Southern Airlines (2), Ethiopian Airlines, flydubai, GEAS, Hainan Airlines, Japan Airlines, Lion Air (2), Norwegian, Shandong Airlines, Southwest Airlines (4), Turkish Airlines, Virgin Australia (2), WestJet |
| B737-900ER | 4 | Continental/United (2), Korean Air, Turkish Airlines |
| B747-8BBJ | 1 | Boeing Business Jets |
| B747-8I | 1 | Lufthansa |
| B767-300F | 2 | Azerbaijan Airlines, LAN |
| B777-300ER | 7 | Emirates Airline (2), Etihad Airways, KLM, Korean Air, Philippine Airlines, Saudia |
| B777F | 1 | Korean Air |
| B787-8 | 3 | All Nippon Airlines (3) |
| Total | 50 | |

Big CFM Deal

FOLLOWING THE large order for the Boeing 737 MAX from Aeromexico (see Americas News this issue), engine manufacturer CFM announced that the airline has chosen the LEAP-1B engine to power the 90 aircraft. The order is valued at \$2.25 billion at list prices. LEAP engines are a product of CFM International a 50/50 joint company between Snecma (Safran group) and GE.

Volcanic Ash Detection

LOW-COST carrier easyJet and Nicarnica Aviation have partnered with Airbus to evaluate airborne volcanic object imaging detector (AVOID) ash detection equipment on the manufacturer's A340-300 test aircraft.

The first phase took place in early July and initial test flights at altitudes of up to 40,000ft were successful. These included mounting the equipment externally on the left side of the aircraft fuselage, with recording equipment and real-time monitors placed inside the cabin allowing viewing of the sky ahead.

The flights were performed to assess the sensor's physical behaviour when mounted on the aircraft and its performance without the presence of volcanic ash.

in brief

Simulator manufacturer CAE has recently sold three full-flight simulators worth a total of more than €550 million, bringing the total number of FFS sales announced to date during the 2013 fiscal year to seven. The latest sales include an Airbus A330 to Aeroflot, a Boeing 787 to Air Canada and a 737NG to the Kunming Aviation Safety Training Centre in China.

Airbus has reported that the first 'cutting of metal' for the A320neo has taken place, marking the beginning of the manufacturing process. Machining of the first engine component was undertaken at the company's dedicated pylon and nacelle factory in Toulouse.

GKN Aerospace has opened an engineering and technology centre at its Filton site near Bristol. It will focus on future wing structure design and manufacture, with over 100 engineers expected to be based at the site providing integrated design and build capability. Over 50 permanent staff are already in place at the Filton centre and a recruitment programme is under way to fill the remaining posts. (Photo GKN)



The International Civil Aviation Organization's (ICAO) Committee on Aviation Environmental Protection (CAEP) has unanimously agreed on a system that characterises the CO₂ emissions for aircraft types with varying technologies. The CAEP agreement will allow the member States and observer organisations to move onto the next stages in the development of an ICAO CO₂ aircraft standard.

Aircraft lessor RBS Aviation Capital has been acquired by the Sumitomo Mitsui Banking Corporation and renamed SMBC Aviation Capital. It claims to be the fourth-largest company in its sector with 209 aircraft and another 82 on order for delivery by 2015.

SR Technics and Finnair have signed an agreement for engine and component services. The carrier will source all engine services for its Airbus A320s and A340s and component services for its Airbus and Embraer fleets from SR Technics, starting in July.

SAS Scandinavian Airlines and Lufthansa Technik have signed a seven-year component supply contract for the carrier's complete fleet of some 140 aircraft. Spare parts will be supplied to the airline's home bases at Copenhagen, Stockholm and Oslo. The contract also includes IT integration services.

AIR FREIGHT TAKING IT



The huge development of air transport in the Gulf region in the past two decades has provided many opportunities to launch new ventures in the commercial aviation sector.

Maximus Air is one of the best examples in that it combines air cargo charters as well as aircraft, crew, maintenance and insurance (ACMI) leasing in a geographical area where freight transport has been historically growing at 2.3 times the level of the region's gross domestic product (GDP). Set up in Abu Dhabi in 2005, and

The Antonov An-124 is possibly the most specialised outsized heavy-weight cargo-lifter in the world. (Airteamimages.com/Dave Sturges)

In 2007, the Ilyushin Il-76TD fleet was kept active transporting relief goods for the 'African Union' mission in Sudan. More than 900 tonnes of cargo were airlifted by the rugged Russian four-engined jets on 60 flights in less than two months.

now with a European base in the UK at London/Stansted as well, Maximus Air (formerly known as Maximus Air Cargo) has grown to become the largest all-cargo airline in the United Arab Emirates (UAE) as well as the signature operator of large cargo aircraft in the region. As reflected in its name, the carrier specialises in outsized air cargo requirements and is a wet-lease specialist offering its services to any operator – be it a mainline

scheduled carrier, a governmental entity, VIP customer, military or humanitarian organisation – and supplying the most practical, and cost-effective, logistical solutions.

History

Maximus Air Cargo's adventure started in 2005 when the UAE President, Khalifa bin Zayed Al Nahyan, approved the launch of an air freight operation

Luigi Vallero analyses the progress of the Gulf region's specialised outsize cargo carrier – Maximus Air



TO THE AX



The Ilyushin IL-76TD fleet, although quite fuel thirsty, allows unmatched capability to transport weights of up to 46 tonnes from airports with little or no loading support devices. (All images Maximus Air Cargo unless stated)



MAXIMUS AIR

ICAO Code: MXU

Radio: 'Cargo Max'

www.maximus.aero

www.carebyair.org

Maximus launched a five-year strategic plan in 2007 and introduced a further aircraft type – in the shape of two Airbus A300-622RFs.

using three Ilyushin IL-76TDs and a single Antonov An-124-100 (previously operated by the UAE Air Force); an unusual fleet mix for any airline operation outside of the CIS.

Besides the aircraft crews, the original company staff amounted to only 14. Having previously been a government-run organisation, with the four Russian-built aircraft placed on the Ukrainian register, the first issue for the new 'airline' was to gain a commercial operator's Certificate of Airworthiness (CoA) as well as assuming a clearly defined trade identity. The name Maximus – Latin for 'greatest' or 'largest' – was finally chosen to underline the company's aircraft capacity, fleet size and diversity, flexibility and efficiency.

At the end 2005, the first year of operations, the company had flown 578 hours and had a turnover of \$12 million. The An-124, which was temporarily operated by Aviant on behalf of >>





Maximus Air Cargo, provided an ideal opportunity for the new venture, being possibly the most specialised outsized heavyweight cargo-lifter in the world. It includes a self-contained system of multiple winches and overhead cranes and has a 120-tonne airlift capability. The Il-76TD fleet, although quite fuel thirsty, allows unmatched capability to transport weights of up to 46 tonnes from airports with little or no loading support devices.

The UAE's General Civil Aviation Authority's (GCAA) Air Operator's Certificate (AOC) was successfully obtained on June 25, 2007. This made the airline fully-compliant with stringent standards comparable to EU OPS-1 (the EU regulation specifying minimum safety and related procedures for commercial passenger and cargo fixed-wing aviation) – and able to commercialise its charter capacity in the Gulf region from both Abu Dhabi International and Al Bateen Executive Airports.

Adding to an already eclectic fleet mix, the airline soon acquired two ex-UAE Air Force Lockheed L-100-382G Hercules – placing them on the UAE Civil Register with the appropriate registrations A6-MAC and A6-MAX – to become one of the few airlines in the world flying the type in commercial service.

The Lockheed workhorse – fitted with an airliner-style 16 passenger cabin including a galley and toilets (mounted on pallets) – gave Maximus access to small airports, and even those with

only gravel strips, while still uploading weights of up to 19 tonnes, and proved to be an ideal machine for humanitarian missions in Africa.

With the global ACMI wet-lease business growing at around 18% per year, Maximus launched a five-year strategic plan in 2007 and introduced a further aircraft type – in the shape of two Airbus A300-622RFs (A6-MXA and A6-MXB). The European-built twin-jet had been identified as the most cost-efficient aircraft to fulfil the cargo needs of many potential customers.

The year proved to be a very important one for Maximus, which opened its European sales office at London/Stansted Airport. It also committed to an 18-month overhaul and upgrade programme for the three Il-76TDs with the Ilyushin Design Bureau. The

“WE ARE DELIGHTED TO HAVE BEEN SELECTED BY ONE OF THE WORLD'S FOREMOST LOGISTICS COMPANIES TO PROVIDE AIRCRAFT UNDER AN ACMI AGREEMENT.”

President and CEO Fathi Hilal Buhazza.

| FLEET: | | | | |
|---------------------|--------|-------------|------------|--------------|
| Type | Reg'n | c/n | Capability | Notes |
| Airbus A300B4-622RF | A6-HAZ | 837 | 46 tonnes | current |
| | A6-MXA | 788 | 46 tonnes | current |
| | A6-MXB | 767 | 46 tonnes | current |
| | A6-NIN | 797 | 46 tonnes | current |
| | A6-SUL | 836 | 46 tonnes | current |
| Antonov An-124-100 | UR-ZYD | 19530502843 | 120 tonnes | current |
| Ilyushin Il-76TD | UR-BXQ | 1023410360 | 46 tonnes | current |
| | UR-BXR | 1023411384 | 46 tonnes | current |
| | UR-BXS | 1023411368 | 46 tonnes | sold in 2011 |
| Lockheed L100-382 | A6-MAC | 382-5024 | 19 tonnes | sold in 2011 |
| | A6-MAX | 382-4895 | 19 tonnes | sold in 2011 |
| | A6-QFY | 382-4961 | 19 tonnes | sold in 2006 |

contract, valued at more than \$10 million, added seven years of flying to these specialist aircraft.

The year's commercial highlights for the company included securing short- and medium-term ACMI contracts for the A300s and flying regular scheduled services on behalf of both Etihad Airways' Crystal Cargo and Iberia – its first two large airline customers. Meanwhile, the Il-76TD fleet was kept active transporting relief goods for the 'African Union' mission in Sudan. More than 900 tonnes of cargo were airlifted by the rugged Russian four-engined jets on 60 flights in less than two months.

By April 2008, with an eight-strong fleet of four aircraft types, the company's workforce had grown to more than 130. Being, in effect, an extension of the UAE's Presidential Flight, providing high-quality services and paying close

Above - The Antonov An-124 includes a self-contained system of multiple winches and overhead cranes and has a 120-tonne airlift capability. (Author)

Right - The airline acquired two ex-UAE Air Force Lockheed L-100-382G Hercules – placing them on the UAE Civil Register with the appropriate registrations A6-MAC and A6-MAX. (Airliner World)



attention to detail have been in the company's DNA since its inception: this was reflected by the multiple awards it's won, including Supply Chain and Transport Awards' (SCATA) 'Air Cargo Operator of the Year' – first in 2008 and then again in 2010. The company's President and CEO, Fathi Hilal Buhazza, also received the 2008 Social Conscience of the Year Award at LOG's 'Logistic Excellence Optimisation' award ceremony for his initiative to offer flights to charity organisations at cost price via the 'Care by Air' programme (see panel).

Additional short- and medium-term ACMI contracts on both A300s were secured with the aircraft flying regular scheduled services on behalf of Iberia, Etihad Airways, Air France and Sudan Airways. A formal co-operation

Above • The – not unsurprisingly – spacious cockpit of the Antonov An-124. (Airliner World)

Above right • The ability to open the nose of the Antonov An-124 allows cargo to be driven straight onto the aircraft. (Airliner World)

In 2011, Maximus' sold both Lockheed Hercules and one Ilyushin Il-76, so that the company could focus on the ACMI sector.

agreement was also reached with the UAE Red Crescent with Maximus appointed as the exclusive partner for its air relief support programmes. During the first nine months of 2008, non-scheduled flight hours grew from 1,885 to 6,883 (compared to the same period of 2007) with freight-tonne kilometres (FTK) flown up from 69 million to 278 million. The customer base in the meantime had expanded to include Air Charter Service, UPS, DHL, Lufthansa Charter, BAE Systems, Air Charter UK, Panalpina, Qatar Airways, Air Freight Aviation Logistics, Air Partner and Chapman Freeborn as well as UAE government/authority agencies including Presidential Affairs, Royal Family, UAE Armed Forces, UAE Red Crescent, Abu Dhabi Equestrian Club and the Equestrian Federation.

Although a relatively complex operation, the company's mixed fleet of freighters enables it to assign the right aircraft to a specific air cargo requirement. In 2009 Maximus joined the Abu Dhabi Aviation Group, which includes helicopter and turboprop operator Abu Dhabi Aviation and VIP specialist Royal Jet. Two years later, Maximus was operating its fleet across the Middle East, Europe, Africa and Asia on behalf of numerous clients while providing regular commercial cargo services. Maximus also obtained the International Air Transport Association's coveted IATA Operational Safety Audit (IOSA) certification in 2011 and by the end of the year, it had completely revamped its image by rebranding as Maximus Air, losing the word 'Cargo' >>





'CARE BY AIR' Programme

Jointly launched in November 2009 by Maximus Air Cargo, Etihad Airways and ADAC (Abu Dhabi Airports Company), the 'Care By Air' non-profit humanitarian organisation aims to provide cargo space 'at cost' in order to deliver relief aid to disaster-stricken areas around the world. Supporting members to the initiative include the UAE Red Crescent and the United Nations World Food Programme (WFP), while further partner organisations are expected to join the cause. Maximus' President and CEO, Fathi Hilal Buhazza, together with Etihad Airways CEO James Hogan and ADAC's Senior Vice President Operations, Ahmed Al Haddabi, pledged their support as founding members by signing a memorandum of understanding. The document was also signed by supporting members represented by His Excellency Ahmed Humaid Al Mazrouei, Chairman of the UAE Red Crescent Authority, and Finbarr Curran, Country Director of the United Nations

World Food Programme.

The rationale of the 'Care By Air' programme – open to cargo and hybrid airlines as well as to suppliers – is based on IATA statistics that say roughly only 70% of the maximum cargo loading capacity on commercial services worldwide is used. This suggests that up to four million tonnes of empty space are flown every week, from more than 3,400 airports across 220 countries. On this basis, if only 0.0003% of this space were to be filled, then five million people in need could be fed for a day. 'Care By Air' aims to provide cargo services to relief and humanitarian organisations 'at cost' across its network of partner organisations and businesses, ensuring the distribution of aid and vital supplies in times of need.

"Our commitment to humanitarian and relief operations is passionate and these missions show the 'Care by Air' concept successfully in practice. Together with our partners we have

demonstrated how the 'Care by Air' at cost business model can really work to reduce costs in the field of humanitarian aid," said Fathi Hilal Buhazza. "We are proud to launch such a worthy cause from the UAE."

Cargo carriers participating in 'Care By Air' are invited to quote to the organisation a number of humanitarian flights 'at cost'. The sustainability of the model differs for each airline, depending on its internal costs structure. For Maximus Air this value is set at about 5% of all the charter services it operates. The airline will benefit from having its variable cost structure covered, while fixed costs including maintenance will be spread over a higher aircraft utilisation, finally reducing the overall overhead burden for the rest of its services. Benefits for the airline also include a return in terms of image, as the carrier is entitled to carry the 'Care by Air' logo on its aircraft and will receive extensive media coverage by the organisation.

to underline its aim to be an all-round air services provider. Despite the global financial downturn, Maximus' performance remained strong with growth and profit margins exceeding the company's targets – helped by Abu Dhabi's geographical location, at the centre of traffic flying between European, Asian and African markets.

Maximus Air today

The airline today operates in a number of specialised key market sectors including charters carrying outsized air cargo, wet-leasing aircraft, transportation of dangerous goods, VIP flights, rapid

response within six hours' notice and humanitarian support to virtually any destination worldwide. It is also well respected in the specialised area of transporting horses and other animals.

In 2010 the company recorded 10,276 flying hours and a turnover of \$116.8 million a 38% and 18.5% increase respectively compared to the

previous year. Despite this growth, in 2011, Maximus' fleet composition was revamped, with both Hercules and one Il-76 being sold, so that the company could focus on both the ACMI sector as well as possibly developing its own scheduled operations. Three more Airbuses were acquired to replace them, the new aircraft joining the fleet in July

'Care By Air' is a non-profit humanitarian organisation that aims to provide cargo space 'at cost' in order to deliver relief aid to disaster-stricken areas around the world.

"WITH THE GLOBAL ACMI WET-LEASE BUSINESS GROWING AT AROUND 18% PER YEAR, MAXIMUS LAUNCHED A FIVE-YEAR STRATEGIC PLAN IN 2007 AND INTRODUCED TWO AIRBUS A300-622RFS."



The Airbus A300B4-622RFs are capable of carrying 46 tonnes of freight.

The latest Airbus are ex-Japan Airlines passenger aircraft converted by European Aeronautic Defence and Space Company's (EADS) Elbe Flugzeugwerke in Dresden, Germany.



and September 2011 and February 2012. These are ex-Japan Airlines passenger aircraft converted by European Aeronautic and Space Company's (EADS) Elbe Flugzeugwerke in Dresden, Germany. Two are being used on the regional scheduled cargo network for Etihad Cargo, while at the 2011 Dubai Air Show, Maximus announced a further development in its business partnerships outside the Middle East after signing an ACMI deal with DHL. Under the terms of this contract, two of the newly-converted Airbuses operate for the courier across Europe.

"We are delighted to have been selected by one of the world's foremost logistics companies to provide them with these aircraft under an ACMI agreement," said President and CEO Fathi Hilal Buhazza at the show. "They have already started flying on their new contracts. Going beyond the shores of the UAE and the region and further into international airspace is part of our new growth strategy."

Thanks to Johanne McConachy, Marketing Manager Maximus Air, for her help in preparing this article.





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Olympic Airline Livery

Once again *Airline World's* 'Olympic Airline Livery' competition has shown that our readers have a strong understanding of the commercial aviation industry as well as possessing stunning creative talents. We received more than 200 entries from around

the world and have enjoyed looking through all the innovative designs. Entries came from pre-school children to professional design agencies. The competition, which was launched in the April 2012 issue, invited readers to design a special Olympic livery for an existing airline.

Barry Woods-Turner announces the winning entries and highlights some of the more interesting designs received.

FIRST PRIZE
Congratulations to Joseph Gerrard from Liverpool who has produced this magnificent and colourful illustration of a British Airways Airbus A380, complete with a rhythmic dancer on the tail, and a 'London Calling the World' theme



Wendy Ettema based her illustration on Boeing's new 787 Dreamliner. It features an Olympic Torch on the nose, with colourful flames running down the aircraft's fuselage towards the tail.



Competition – The Results

After long deliberation by the competition judges, an illustration by Joseph Gerrard of Liverpool won first prize and he will receive a specially commissioned framed print of his entry. Two runners up were: Ross Hallam of Measham and Christian Winter of Hannover, Germany, who will each

receive a one-year subscription to *Airliner World*. A selection of images that made the judge's final shortlist are reproduced on the following pages. The editorial team would like to thank everyone who took the time to send in their entries and a special mention goes to Miss Parkinson's Class 5CP, of Thorpe

Hall Primary School in Walthamstow, London, who sent in some fantastic pictures as part of their June half-term homework project on the London 2012 Olympics. We were amazed and overwhelmed by the care and precision that went into all of the designs received. **WIN**

RUNNER UP



RUNNER UP - In a very close fought contest, Ross Hallam's 'Golden Jetstream 41' of British regional carrier Eastern Airline was just pipped to the winner's post.



Left - The judges were really impressed by the innovative use of colour in this entry from Sarah Watson, who is only three and half years old.

RUNNER UP



RUNNER UP Christian Winter's entry of British Airways' Boeing 747-436, G-CIVP 'Olympic Bird', really caught the judge's eye, especially the clever use of competing nations' flags running down the tail of the aircraft and the iconic London images reproduced on the fuselage side.

This design, named 'Follow Me' was created by Didier Wolff of Happy Design Studio in Strasbourg. The studio has also created the new livery for Maximus Air (see pg 32-33 this issue).



Amy Matthews combines an overall red livery with the five colours of the Olympic rings to good effect in this design.

Scott Leazenby of San Diego, California has adorned the fuselage of a British Airways Douglas DC-10-30 with a world map and official 2012 Olympic logo combination.



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Above • Jim Bola produced this entry of a British Airways Airbus A380 which he has called 'Never stop chasing your dreams'. The design is based on the classic children's story of the Tortoise and the Hare, both of which feature on the aircraft's fuselage.

Below • Phillip Tan, from Singapore, submitted this unusual take on United Airlines' new livery. This Boeing 737-800 is promoting the 2012 London Paralympic Games.



Gabriel Tam has shown great thought in his Qantas Airbus A380 design, including a gold medal around the forward fuselage, a boxing Kangaroo on the tail and the faces of Australian athletes on the window shades.



Oleg Praglowski from Calgary, Canada has cleverly used flight simulation software to showcase his colourful design on a British Airways Boeing 787 Dreamliner.



Below • This stylish Airbus A319 was submitted by Glen Di Giovanni, and features an intricate '2012' design which cleverly features the use of metallic paints for an attractive finish.



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Airshow Extravaganza

Saab S100D Argus airborne early warning aircraft, 100004 (c/n 3408-395), is equipped with an Ericsson Erieye radar antenna fitted above the fuselage.

(Key – Tony Dixon)



The annual airshow season is upon us and there have been some very interesting visitors to UK shores this summer. Here is a selection of just a few that have appeared at RAF Waddington and the Royal International Air Tattoo at RAF Fairford in July.

The Royal Norwegian Air Forces operates a pair of modified Dassault Falcon 20ECMs in the electronic warfare training role. This example, 053 (c/n 53) named 'Munin', is operated by 717 Squadron based at Rygge.

(Key – Craig West)



Making a rare appearance in a flying display was Boeing RC-135V Rivet Joint, 64-14841 (c/n 18781) from the United States Air Force. Similar aircraft are being acquired by the RAF as replacements for the Hawker Siddeley Nimrod R1s that were retired last year.

(Key – Craig West)





Resplendent in the red and yellow livery of DHL Air, Boeing 767-3JHF, G-DHLF (c/n 37806), makes an impressive topside pass at the Royal International Air Tattoo. The company also had one of its 757-236SFs, G-BMRH (c/n 24266), available for closer inspection in the static display. (Key – Barry Woods-Turner)



The former British Aerospace 146-300 prototype, G-LUXE (c/n E3001) has been converted into an atmospheric research aircraft for the Facility for Airborne Atmospheric Measurements (FAAM) at Cranfield, Bedfordshire. (Key – Barry Woods-Turner)



Above left • This was the first-ever visit to the UK by a Boeing E-7ES Wedgetail, the airborne early warning and control (AEW&C) system that encompasses both the 737-700 aircraft platform and a variety of aircraft control and advanced radar systems. This example, A30-005 (c/n 33986) belonged to No. 2 Squadron of the Royal Australian Air Force, based at RAF Williamtown, New South Wales. (Key – Alan Warnes)

This Colombian Air Force Lockheed C-130H Hercules, FAC1004 (c/n 382-4964), was a colourful static display aircraft at both the RIAT and Farnborough International shows. (Key – Craig West)



The first time a Japanese military Boeing 767 has ever touched down on UK soil occurred when KC-767J, 07-3604 (c/n 34498) was displayed at RIAT. The tanker aircraft came from 404 Hikotai Squadron of the Japan Air Self Defence Force, Komaki Air Base, Nagoya. (Key – Craig West)

BODØ

Norway's Arctic Hub



Sebastian Schmitz travels beyond the Arctic Circle to visit Bodø, the most important transport hub in northern Norway.

Above right • The semi-circular design of Bodø Airport's terminal building is said to symbolise the midsummer sun.

West Air Europe has a British Aerospace ATP based in Bodø to operate the mail service to Oslo. It is the only cargo carrier to serve the airport.



The northern Norwegian city of Bodø, located just inside the Arctic Circle, is one of the biggest in the region and capital of the Nordland province. It's also an important transport hub – home to the northern terminus of the country's railway system, a port of call for the mail ships operated by Hurtigruten and a vital aviation hub for Arctic Norway.

Strategic Location

Bodø Airport can trace its history back to World War Two when the first makeshift runway was built by British troops following Germany's invasion of southern Norway. Prior to this, the only aircraft to serve the city were seaplanes operated by Norwegian airline Widerøe.

The airfield was opened by the Royal Air Force in May 1940 though its presence was short-lived – the strip was bombed by the Luftwaffe before German ground forces seized control. However, the occupation brought certain benefits: the temporary runway was replaced by a





concrete one, while hangars and office buildings were also added.

Following the end of hostilities, the airport lay dormant for several years but was revived, with support from the US 'Major Defense Acquisition Program', during the early 1950s. The reason was simple – Bodø is strategically located relatively close to the Russian border and during the 'Cold War', a strong military presence in northern Norway was considered crucial by NATO.

Though largely a military facility, the airfield was also used for commercial purposes and a passenger terminal was completed in April 1952. Traffic continued to grow and facility struggled to cope with the increased demand, particularly during peak times – and in 1988 work began on a replacement. By 2011, the airport was handling over 1.7 million passengers and this, coupled with 43,500 civil movements (and a further 11,000 from military aircraft), has established Bodø as the busiest airport in the region.

A City on its Doorstep

Bodø is arguably one of the most conveniently located airports in the world, with the terminal building barely a ten-minute walk, and an even shorter bus or taxi ride, from the city centre. The facility, which was completed in 1990, is built in a semi-circular pattern said to symbolise the midsummer sun. It's very open and

Bodø is operated by state-owned Avinor in co-operation with the armed forces and markets itself as 'a silent airport' – unlike most others, the terminal is not subjected to constant announcements, the only exception being boarding calls at each gate.

Outbound passengers are routed to the first floor where they pass through a very efficient security checkpoint

The terminal building, which handled 1.7 million passengers last year, was completed in 1990.

"FOR THOSE ARRIVING IN BODØ FOR THE FIRST TIME, IT'S IMMEDIATELY APPARENT THAT IT IS NOT YOUR AVERAGE CIVILIAN AIRPORT."

has a pleasant ambience with heavy glazing in the main hall and part of the ceiling allowing in lots of natural light. Passengers are welcomed into the triangular foyer by a Supermarine Spitfire which hangs from the ceiling, while the remainder of the hall is taken up by check-in counters, self check-in machines and airline ticket offices.

Widerøe maintain a vital link between Bodø and some of the smaller surrounding communities. (Widerøe)



BODØ LUFTHAVN

| | |
|------------|---|
| ICAO: | ENBO |
| IATA: | BOD |
| Location: | N67°16'09" E14°21'55" |
| Elevation: | 42ft (13m) |
| Runways: | 07/25 11,136ft (3,394m) |
| Website: | http://www.avinor.no/en/airport/bodo |



Visitors to Bodo Airport are given a warm welcome in both Norwegian and English.



Passengers entering the main terminal foyer are greeted by a Supermarine Spitfire which hangs from the ceiling. (All photos author unless stated)

Bodø is predominantly served by three airlines: Norwegian, Widerøe and SAS Scandinavian Airlines. The latter is the biggest in terms of passengers carried, with its Boeing 737s operating flights to the capital, Oslo, up to seven times daily; a further five rotations are flown to Trondheim and the region's second major airport, Tromsø. The network served by the Scandinavian national carrier is complemented by locally-based regional airline Widerøe. This wholly-owned SAS subsidiary flies to many of the small towns which surround Bodø such as Svolvær and Leknes, along with the outlying Lofoten and Vesterålen islands. The air links are considered essential by these small and remote communities, with the majority being flown under subsidised Public Service Obligations (PSO). Widerøe almost lost its Lofoten Islands contract to rival carrier Danish Air Transport earlier this year, though transfer to the new airline was delayed initially due to operational problems, while a subsequent appeal led

Widerøe is Bodø's largest operator, flying a mixture of scheduled services and Public Service Obligation (PSO) routes. It is not uncommon to see several of its aircraft on the ground at the same time.



| BODØ - CURRENT OPERATORS | |
|-----------------------------------|--|
| Austrian Airlines* | |
| Freebird Airlines* | |
| Lufttransport | |
| Norwegian | |
| SAS Scandinavian Airlines | |
| Thomas Cook Airlines Scandinavia* | |
| Widerøe | |
| *Seasonal only | |

to the decision being overturned.

Like its parent carrier, Widerøe also serves the busy routes to Trondheim and Tromsø but it does not fly direct and will often make one or two stops to smaller towns such as Sandnessjøen and Mo i Rana en route. The airline operates an all-Bombardier fleet, with the majority of its Bodø routes flown by its 20 Dash 8-100; the carrier's larger Dash 8-300s and Q400s rarely frequent the northern Norwegian hub and visits are generally in connection with an overhaul at

Widerøe's principal maintenance base. However, the operator does occasionally employ 78-seat Q400s on its seasonal services to Bergen and Sandefjord.

The third airline to operate from Bodø is Norwegian, the country's fastest growing low-cost carrier. Significantly, it also flies on the trunk routes to Oslo, Tromsø and Trondheim in direct competition with both SAS and Widerøe. However, it operates to points further afield and was the first ever airline to offer a scheduled international service from here when it launched its weekly 737-800 flight to Gran Canaria.

The airport also benefits from seasonal charter services to leisure destinations around the Mediterranean – Freebird operates to Turkey twice weekly with its Airbus A320s while the Greek island of Crete is served by both Norwegian >>





and into the departure lounge which contains most of the airport's eleven gates; two are located on the ground floor and have a separate security area.

The first floor also houses the 'Picnic' restaurant which is located landside and accessible by all visitors. Post-security facilities are limited to a small kiosk which sells drinks, snacks and reading material. Free wireless Internet is available throughout the terminal, an increasingly common feature in airports around the world.

The semi-circular design of the airport lends itself to a very convenient boarding system. Three gates are equipped with jetways for use by larger aircraft such as the Boeing 737 operated into Bodø by both Norwegian and SAS Scandinavian Airlines several times daily. Meanwhile, the far more frequent Bombardier Dash 8s of Widerøe use a different type of departure gate where passengers are separated from the aircraft by just a flight of stairs and a few steps outside. The layout allows

Lufttransport operates a specially modified Beech 200 King Air, LN-LTL (c/n BB-2005), from Bodø in the air ambulance role.

Norwegian flies from Bodø to Oslo, Tromsø and Trondheim in direct competition with SAS and Widerøe. It was, however, the first carrier to launch scheduled international services when it introduced flights to Gran Canaria.

boarding by foot, eliminating the need for bus transfers and also reducing the amount of time travellers have to spend out in the open air, a useful feature particularly during the winter months when weather conditions are often very cold and windy.

The majority of the flights serving Bodø are domestic or are from within the borderless Schengen Area, meaning that passport control is not required. However, the airport also handles international services such as seasonal charters to Turkey – in these instances, one departure gate, which includes a control post, can be separated from the rest of the lounge through the use of glass panels, allowing segregation for non-Schengen passengers.

The process for arriving passengers is even simpler with an escalator transporting them into the main hall where luggage can be picked up. The airport's proximity to the town encourages many of those travellers to walk home from the airport, though

taxis and buses are available.

The terminal is expected to benefit from a refurbishment programme later this year: the two gates on the ground floor will be linked to the main departure hall, meaning that the three separate security checkpoints can be replaced by a single, centralised inspection area. A tourist information office is expected to be built for arriving passengers while the 'Picnic' restaurant will be moved airside, though other facilities will be added for non-travellers.

Routes and airlines

During 2011, the airport handled over 1.7 million passengers, representing an increase of 7.7% over the previous year. Of these, almost 425,000 used Bodø as a point of transfer, underlining its importance not only as a point-to-point destination but also as a connecting gateway. Its performance last year places the airport as the sixth-busiest in Norway with the region's other major airport, Tromsø, close behind.

"TODAY, BODØ'S SINGLE RUNWAY 07/25 PROVIDES A BARRIER BETWEEN THE COMMERCIAL AND MILITARY ACTIVITIES..."



An Aviation Haven

Bodø is a real aviation city. Many of its citizens are employed directly by, or in a role related to, the airport or the air force station. Located at the eastern end of the airfield in a spectacular, propeller-shaped building is the Norwegian Aviation Museum (Norsk Luftfartsmuseum). Divided into distinct military and civilian sections, exhibits include a Junkers Ju-52 on floats, a de Havilland Canada Twin Otter in Widerøe livery, a former Braathens SAFE Fokker 28-1000 and a Lockheed U-2, one of only two complete examples on display outside the US. Visitors can also access a small control tower located on top of the museum which offers excellent views.

While the museum provides a good reason for aviation enthusiasts to visit Norway, Bodø also hosts its own airshow, one of the biggest in northern Europe. This year's event, which was held in mid-June, commemorated the 60th anniversary of the air force base, 70 years of locally-based 331 and 332 Squadrons and a century of military aviation in Norway. Highlights included 16 hours of displays by aircraft including aerobatic teams Italy and Switzerland, the Flying Bulls Douglas DC-6 and Dakota Norway's DC-3. An unusual feature of the show is the small flying display held during the midnight sun rock concert.



and SAS. The facility also welcomes incoming tourists, with Austria Airlines' connection from Vienna proving popular.

The air freight sector at Bodø is small with the only regular carrier being West Air Europe, which operates Norway Post's week-daily mail flight to Oslo. However, the difficult terrain and remote communities which surround the city mean that northern Norway's largest hub attracts some of the country's more unusual operators - Lufttransport's AgustaWestland AW139 helicopters serve the island of Vaeroy with a twice-daily service. Meanwhile, with Bodø's medical facilities being significantly better than those in smaller, outlying towns, the airport is a regular port of call for rescue aircraft, and a specially-equipped Beech 200A Air Ambulance is based locally.

A Different Challenge

Airport Operations Manager Roger Henriksen explained that the weather can often be very challenging, particularly during the winter months. Like most facilities in Scandinavia, Bodø is well prepared and is very experienced in dealing with snow and icy conditions - in fact, it has never been closed for snow removal for more than a few minutes. But the exposed location of the airport on the north-western coast means that strong and gusting winds can pose a major hazard. Henriksen noted that, depending upon the wind direction, Widerøe is often forced to park its small Dash 8 turboprops in the lee side of the terminal building to protect both passengers and aircraft from harsh conditions.

Military Heritage

For those arriving in Bodø for the first time, it's immediately apparent that it is not your average civilian airport. In fact, Bodø Main Air Station is the largest base in the Royal Norwegian Air Force and home to two fighter squadrons, which operate around half of the air arm's Lockheed Martin F-16s.

Though now long gone, the US Air Force also maintained a presence at Bodø, it being an ideal launching point for surveillance missions over the Soviet Union. It was here that Central Intelligence Agency (CIA) pilot Gary Powers was due to land his Lockheed U-2 spy plane on May 1, 1960; but he was shot down over the USSR, causing an international incident. The supersonic SR-71 Blackbird was also a frequent visitor during the 'Cold War', the airfield's 11,136ft (3,394m) long runway making it an ideal emergency landing site - in fact one jet received special 'Bodonian Express' titles after making five such landings here between 1981 and 1985. The facility is also capable of handling much larger aircraft and, in 1975, played host to an Aerospatiale/BAC Concorde during a series of test flights. Interestingly, Dubai-based carrier Emirates recently visited the site to examine its suitability as an emergency alternate landing site for its transatlantic Airbus A380 Superjumbo flights.

Today, Bodø's single Runway 07/25 provides a barrier between the commercial and military activities, though 72 hardened air shelters continue to stand all around the airfield including on the civil side.

The airport is very convenient for passengers and, thanks to its spectacular location and unusual heritage, is also an interesting alternative for aviation enthusiasts. **AVI**

"BODØ IS ARGUABLY ONE OF THE MOST CONVENIENTLY LOCATED AIRPORTS IN THE WORLD..."

Located on the north-western coast of Norway, the scenery surrounding Bodø Airport is truly spectacular.



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Boeing 757-2K2,
NZ7571 (c/n 26633)
appeared at the
Waddington Air Show
wearing these special
markings celebrating
the 75th anniversary of
the Royal New Zealand
Air Force. The aircraft
was visiting the UK
with a delegation of 32
veterans who attended
the unveiling of the
Bomber Command
Memorial in London on
June 28.

Photo - Key - Craig West





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AVAILABLE
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Málaga Aviation Museum

The 'Costa del Sol's' little-known jewel



Spain's National Museum of Airports and Air Transportation, located at the southern end of the Málaga Airport complex, is well worth a holiday visit, as Roger May found out...

The National Museum of Airports and Air Transportation next to Málaga's Airport is a well-run and growing treat for the aviation enthusiast and tourist alike. It is situated inside a restored 1938 hacienda-style airport terminal, with its Air Traffic Control Tower and surrounding buildings, instantly transporting visitors back in time to the glory days of civil aviation travel. To the rear of the site there is a bigger, modern building housing the smaller aircraft in the collection, as well as airport- and aircraft-related displays and equipment.

Within the grounds there is a large number of retired airport vehicles and the transport aircraft. The latter include



a Douglas DC-3 (C-47B) in Iberia colours, a Beech 18 in Spantax livery, a superb Convair CV-440 in the markings of Kar Air of Finland, a de Havilland DH104 Dove of Martin's Air Charter of Holland, and the front fuselage section of an Iberia DC-9-30. >>

Above • The view from 'airside' with the restored passenger walkway on the left illustrates the hacienda-style architecture well.

Above right • The uniform displays provide a fascinating record of in-flight fashion over the years.



The old terminal, with the Spantax-liveried Beech E185 EC-ASJ (c/n BA-6) in front.

There is heavy emphasis on education, with visitors able to enjoy interactive displays, and other exhibits tailored to the younger and older student alike. School parties can be given a history lesson of not just the airport and aviation in Málaga, but about Spain as a whole. From dedicated aviation historians and enthusiasts to casual visitors – everyone will find there is plenty of interest. The exhibits within the museum are well thought out, with a large collection of model aircraft, memorabilia and uniforms, as well as displays of how aircraft work and how airports are run and constructed.

The museum has a small dedicated team, made up of a few full-time employees and a very enthusiastic group

Restoration work continues on the flight deck of Douglas DC-3, EC-ABC. The museum is keen to hear from any companies, airlines, museums or individuals who can help with equipment or seats for its aircraft.

Below - Awaiting its turn for some 'tender loving care', is Martin's Air Charter de Havilland DH104 Dove 7, PH-VLA (c/n 04534).

Main image - Iberia Douglas DC-3 (C-47B), EC-ABC (c/n 17094/34361) is undergoing restoration with a recently replaced new rudder.



of volunteers. They are currently in the process of constructing an aircraft flight deck simulator in one of the rooms.

The facility is always on the look-out for spare parts and instruments for its aircraft and would love to hear from other museums, airlines, associated companies

and individuals who can help with its restoration projects. Amongst other things, the team is currently looking for seats to fit into the CV-440 and radio equipment for the DC-3.

The museum has the added bonus of being officially sanctioned, and



Photography Information

The aviation photographer will find the holding area and the end of the main runway is within a 200mm to 300mm lens range for airliners – smaller aircraft landing etc will need a larger lens. However, you should be aware that:

- There is no shade and the sun can be strong even in winter, so some form of personal sun protection is recommended.
- Heat haze – even on the cooler days, this can be a problem.
- During the afternoon, pictures are taken into the sun. This is only a problem in winter as in the summer the sun is very high in the sky.
- Although visitors are in an official viewing spot where photography is allowed, there are a number of VIP and military movements at Málaga, the authorities and Civil Guard are always in attendance, so a common sense approach is advised when taking photographs!



Aircraft at the main airport are easily photographed, such as this easyJet Airbus A319-111, G-EZBA (c/n 2860).





The front fuselage of former Aviaco and Iberia Douglas DC-9-32, EC-CGO (c/n 47640). (All photos author)

supported by the Spanish Airport Authority AENA (perhaps other airport operators could take note), and, as part of the facility there is a dedicated viewing area for the main airport - Spain's fourth busiest international hub - with good >>





views of the extensive general aviation ramp, taxiways, and runway beyond.

Remember when you have had enough of aviation, there is always sun, sea, sand and large local brewery that this area is famous for – so this author knows where he'll be heading for his next holiday! ☺☺☺

The author would like to thank museum manager Joaquín de Carranza Paris, as well as the staff and volunteers of the museum for their time and patience over several visits.

Superbly restored Convair CV-440-75, OH-VKN (c/n 503), in the colours of Finnish carrier Kar Air.

A good view can be had from the original control tower over the large general aviation ramp and the landing runway beyond.

Many of the smaller exhibits are displayed 'stripped down' for educational purposes.



FULL AIRCRAFT LIST:

| Type | Reg'n | C/N | Markings |
|---------------------------------------|--------|-------------|----------------------------|
| Air Creation | - | - | (microlight) |
| Beech E185 | EC-ASJ | BA-6 | Spantax |
| Bell 47G 3B | EC-DZL | 1613 | (under restoration) |
| LET Super Aero 145 | EC-APH | 04-005 | (stored) |
| CASA CN235-200 | EC-FBC | C033 | Binter (tail only) |
| Convair CV-440 | OH-VKN | 503 | Kar Air |
| de Havilland DH104 Dove | PH-VLA | 04534 | Martin's Air Charter |
| Dornier Do-27B | EC-CFS | 193 | (under restoration) |
| Douglas DC-3 (C-47B) | EC-ABC | 17094/34361 | Iberia (under restoration) |
| Douglas DC-9-32 | EC-CGO | 47640 | Iberia (front fuselage) |
| Wassmer WA-40 Super IV | OO-GRH | 102 | (under restoration) |
| Outside main airport buildings | | | |
| Cessna 421B Golden Eagle | EC-FPA | 0530 | |

The museum is free to enter and is open Tuesday to Sunday 10am to 2pm, and Tuesdays from 5pm to 8pm. It is closed on Mondays.
The museum website is: www.aeroplaza.org Email: agpmuseo@aena.es

Bombardier's *Game Changer*

Craig West visits Montreal to report on the progress of Bombardier's next-generation narrowbody jet, the CSeries.

Development of the CSeries has been somewhat arduous since it was first proposed during the late 1990s. After several false starts, the CSeries, so named because the key elements of its design included cost, customers and capacity, was officially launched at the 2008 Farnborough International Airshow. Significantly, the aircraft would lead the manufacturer into direct competition with the two powerhouses of narrowbody aircraft production; Airbus and Boeing.

Concept

The CSeries, which is funded by Bombardier, third party suppliers and the Governments of Quebec, Canada and the UK, represents a significant departure for a manufacturer that built its reputation around regional turboprop and jet aircraft. The Canadian firm is developing two models simultaneously – the CS100 and larger CS300, offering seating for 120 to 145 passengers. The aircraft, which are both powered by Pratt & Whitney's (P&W) PW1000G Geared Turbofan engine, share a 90% commonality allowing

customers to switch their orders between the two models up to the final production stage. Like both the new-generation 787 Dreamliner and A350, the Canadian-built airliner is designed around fuel-efficient engines and a largely composite fuselage with carbon emissions expected to be up to 20% lower than other in-production aircraft; this figure rises to 50% when compared to out-of-production types.

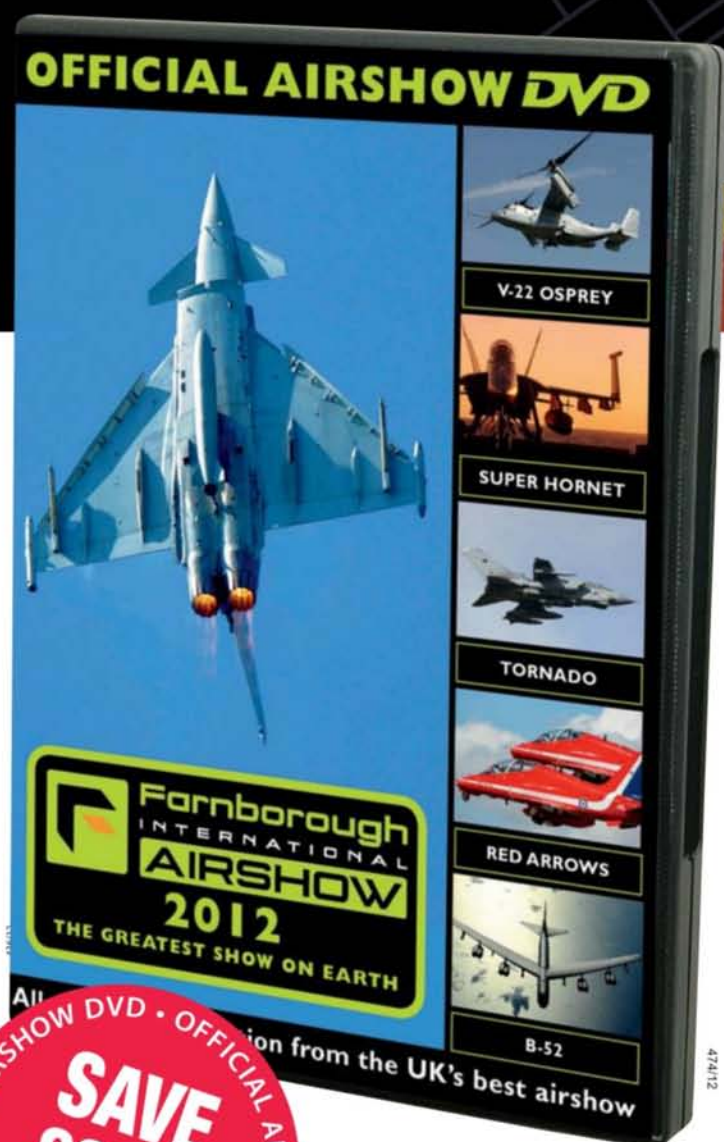
Close liaison with customers formed a key part of the new jet's development. Captain Peter Koch from Swiss >>



Korean Air is one of several mainline carriers who have ordered the CS300. The jet is expected to be a natural complement to its larger Boeing 737s.

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Bombardier's 'Wooden Bird' is unorthodox but has allowed the manufacturer to uncover difficulties in the C-Series assembly process. (All photos Bombardier)

"WITH PLANS TO FLY THE FIRST PROTOTYPE BY THE END OF THIS YEAR, TIME IS RUNNING SHORT FOR BOMBARDIER."



European Air Lines, one of the type's early customers, was consulted on the final flight deck layout, with Bombardier designing the cockpit to be logical and intuitive. In place of conventional control yokes are Airbus-style sidesticks while the panel features five, 15.1in (38.4cm) LCD display screens which include an integrated flight management system, advanced weather radar and electronic checklist. A head-up guidance system can be fitted as an optional extra.

The CSeries is also Bombardier's first production aircraft to feature advanced fly-by-wire. Developed by Parker Hannifin Corp and Rockwell Collins, work first began on the system in the late 1990s but, at the time of writing, the digital controls, which offer a significant

Bombardier liaised closely with customers, including Swiss European Air Lines, over the layout of the flight deck, with the manufacturer claiming it has been designed to be logical and intuitive for crews.

Below • Bombardier is offering the CSeries in a spacious four abreast in Business class, five abreast in Economy configuration.

weight reduction over conventional hydraulic controls and are cheaper to maintain, are currently the biggest risk to the success of the programme.

Ben Boehm, Bombardier's Vice President business development and strategy

"ONCE DELIVERIES ARE UNDERWAY, BOMBARDIER HAS EXPRESSED ITS DESIRE TO INCREASE PRODUCTION TO 100 AIRCRAFT PER YEAR."

commercial aircraft, explained that the company has signed up to risk-sharing arrangements with its suppliers and has delegated design responsibility for key components. The Canadian manufacturer does not, for example, own the design authority for the Liebherr Aerospace-produced landing gear, but it does own the interface – how the landing gear works and fits within the aircraft. In other instances, components such as the wings are produced within the company but away from the CSeries production facility at Montréal/Mirabel. "Belfast [Northern Ireland] is the lead integrator for all wing systems so when a wing unit arrives in Canada, it is stuffed [with

various components], tested and ready to plug and play," Boehm remarked.

This integrated supply chain is a tried and tested system for the Canadian manufacturer, which has used this arrangement since the early 1990s. Like Boeing, Bombardier's first experience with this system was problematic, with its Global Express business jet being delayed by two years. However, several new designs have been introduced since then. Boehm commented: "We have built more aircraft using an integrated supply chain than both Airbus and Boeing. There are companies around the world that are experts in their respective fields. We cannot be experts in every element, so we use these specialist suppliers. We are, however, experts in integration."

Despite its recent success, Bombardier has run into difficulties with the CSeries and recently announced that it was temporarily relocating development and production of the forward, centre and rear fuselage sections, tail cone and centre wing box from its Chinese partner Shenyang Aircraft Corporation to Mirabel.

Building for the Future

Though concerns remain around whether the CSeries will complete its first flight by the manufacturer's end of year deadline, construction of major components for the first seven airframes, consisting of five flight test vehicles (FTV) and two static test rigs, is well under way.





Bombardier's 1 million sq ft (92,903m²) facility at Saint-Laurent, Montréal, is building the carbon-fibre aft fuselage and cockpit sections ready for shipping to the final assembly line at nearby Mirabel. The manufacturer was unable to expand the 70-year-old site, former home of Bombardier's predecessor Canadair, so upgraded more than 100,000sq ft (9,000m²) of the plant to support production of major components for the new CSeries. The assembly process includes a fully automated moving line using the latest lean manufacturing principles, while machinery, equipment and tooling have all been updated.

As part of its drive to reduce the weight of its new model, Bombardier has built on its experience in composites technology and is using automated fibre

placement (AFP) techniques to build the carbon-fibre composite aft fuselage. A computer-controlled robot deposits the fibre in 4in (10cm) strips across a metal skeleton before the entire component goes through a cold cure process, effectively welding the layers together. The robot can apply the carbon fibre in any direction, allowing the manufacture to be very precise when applying reinforcement panels, reducing the amount of material used and, in turn, the weight. This procedure currently takes several days, though Bombardier is optimistic that this will be reduced significantly as the process is refined.

Unusually, the manufacturer does not use overhead cranes. Instead, it relies heavily on robots, with over 93% of all fastenings automated to



CSERIES SPECIFICATIONS

| | CS100 | CS300 |
|----------------------------|----------------------------------|----------------------------------|
| Passengers | 110 Standard 125 Max Capacity | 130 Standard 145 Max Capacity |
| Flight crew | 2 | 2 |
| Length | 114ft 6in (34.9m) | 124ft 10in (38m) |
| Wingspan | 115ft 1in (35.1m) | 115ft 1in (35.1m) |
| Cabin width | 10ft 9in (3.3m) | 10ft 9in (3.3m) |
| Max take-off weight | 128,200lb (58,151kg) | 139,600lb (63,322kg) |
| Max range | 3,395 miles (5,463km) | 3,395 miles (5,463km) |
| Max cruise speed | 470kt (871km/h) | 470kt (871km/h) |
| Service ceiling | 41,000ft (12,497m) | 41,000ft (12,497m) |
| Engines | 2 x Pratt & Whitney PW1500G | 2 x Pratt & Whitney PW1500G |
| Thrust per Engine | 18,900lb – 23,300lb | 21,000lb – 23,300lb |

ensure uniformity. The nose sections move through several positions during production, including being rolled vertically to aid installation of the floor panels and to provide access to the upper fuselage. The sections are then 'stuffed' before being shipped for final assembly.

In preparation for the CSeries, Bombardier has invested heavily in its Mirabel plant, located 25 miles (40km) west of Montreal. Until recently, the facility was home to the CRJ production line but, in order to accommodate the much larger aircraft, the site will undergo significant expansion. Bombardier will add a further 1.2 million sq ft of buildings (111,500m²) including a new final assembly facility, delivery centre, paint shop and administrative offices.

The Canadian manufacturer hopes to have FTV1, the first CS100 prototype, assembled by late 2012. The 'plug and play' nature of the components being shipped into Mirabel should ease the final assembly process, though integration of the different materials used in these parts poses a unique challenge – the CSeries includes 46% composites (nose, aft fuselage, wings and stabilisers), 32% aluminium lithium (fuselage) and 7% titanium. To get around this problem, all of the major components are mounted onto metal frames to allow easier mating and avoiding the complex aluminium to carbon-fibre bonding.

Bombardier has taken a number of steps to ensure that the programme remains on budget and on time, with one of the most unusual being the

Above • The nose and aft fuselage sections of the CSeries are built on a moving production line at Bombardier's Saint-Laurent facility.

Above left • Bombardier has invested heavily in its Mirabel site, upgrading the former CRJ hangars to accommodate the larger CSeries aircraft.

Swiss Efficiency

Swiss European Air Lines is currently one of the largest customers for the Bombardier CSeries with Lufthansa having ordered 30 examples for its subsidiary. With rising fuel costs and increased competition from low-cost carriers, efficiency is high on the airline's agenda and it has confirmed plans to replace its 20 ageing Avro RJ100s with 30 CS100s as part of a CHF 1 billion (£650 million) fleet renewal programme.

The new generation airline will offer several advantages, including a reduction in fuel consumption of over 25% compared to the four-engined RJs – this will cut CO₂ emissions by 90,000 tonnes per year, the equivalent of 7,000 flights between Zurich and London. The state-of-the-art CS100 is also 10 to 15 decibels quieter than its predecessor but is able to operate into the same restricted airports as the Avro aircraft, such

as London City and Lugano.

The benefits of the new type also extend inside the cabin, where passengers will have more space, while lower operating costs mean that Swiss can acquire ten additional CS100s to accommodate future network growth.

"The short-haul segment is a key element in our network," Swiss' Chief Network & Distribution Officer Harry Hohmeister commented. "With our choice of Bombardier's new CSeries, we are underlining the key role that we play in our operations. In today's fiercely contested air transport market, planning long-term product investments, raising efficiency companywide and continually reducing our costs can give us a vital competitive edge." Swiss is expected to be one of the early operators of the type and will receive one example per month from early 2014.



construction of the 'Wooden Bird'. It has created a full-scale wooden mock-up to uncover inevitable difficulties in the CSeries assembly process. Sebastien Mullet, director of the CSeries programme office, explained that Bombardier selected 45 experienced engineers to work on the model and identify areas of improvement: "The target for the end of 2012 is 1,000 items and, by mid-June, they had found over 600." Suggested changes revolve around the sequence of assembly, the standard of the work and the health and safety of the employees. The replica is an unprecedented measure, but suggests that company is leaving nothing to chance.

Extensive Testing

The 'Wooden Bird' is one of several mock-ups contributing to the testing process. Housed in the state-of-the-art Complete Integrated Aircraft System Test Area (CIATSA) at Mirabel is a full-scale fuselage mock up used to evaluate the Environmental Control Systems. By September, the rig will be fitted with a full cabin interior and will test the pressurisation, air conditioning, heating, lighting and cabin management systems.

Bombardier's Director of CSeries Ground Tests, Pierre Laforge, explained that these elements will eventually be installed on FTV5, the final flight test aircraft. "This is the first time we have done this – the rig doubles as a full installation so by the time we are ready to fit the systems on a real aircraft, the designs will have been refined and only minor modifications will be required. Previously, we have not tested these elements until they were installed on the aircraft, and on some occasions this has been too close to the certification and entry into service and has caused delays."

Testing is also under way on Airplane 0, also known as the 'Iron Bird'. Effectively a structureless reproduction of the CS100, the rig integrates every non-fuel system including the hydraulics, avionics, electrics and primary flight controls, accounting for around 85% of the aircraft's systems. The frame is the most comprehensive to date and is equipped with actuators driven by a CAE flight



simulator, replicating in-service usage on the rig – Iron Bird is effectively a complete aircraft that can replace actual flight hours, shortening the test regime and acting as an additional FTV.

Bombardier is expected to use five CS100s for the one-year certification programme and will add one per month from December. Each aircraft is expected to undertake specific roles – FTV1 and 2 will be heavily instrumented and will be used for the early flight testing, 3 and 4 will perform the more routine operational testing and the final jet will have a full interior fit. Two CS300s will be added to the test fleet next year ahead of a planned entry into service of 2014.

Once deliveries are under way, Bombardier

has expressed its desire to increase production to 100 aircraft per year via a second line at Mirabel. Ben Boehm noted, however, that the manufacturer did not want to overwhelm new operators of the type, and was also keen to avoid having a large backlog of aircraft requiring modification. "Our target for ramp up is 2014 or 2015, ideally the former but simultaneously introducing two models makes this more difficult to achieve."

CSERIES ORDERS AND COMMITMENTS

| | | |
|---------------------|-----------|----|
| Air Baltic | CS300 | 10 |
| Atlasjet | CS300 | 15 |
| Braathens Aviation* | CS100/300 | 10 |
| Korean Air | CS300 | 10 |
| Ilyushin Finance | CS100/300 | 30 |
| Lease Corp Int | CS100/300 | 20 |
| Lufthansa** | CS100 | 30 |
| PrivatAir | CS100 | 5 |
| Republic Airways | CS300 | 40 |
| Undisclosed | CS100 | 13 |

* For Malmo Aviation

** For Swiss European Air Lines

Flying into Service

The CSeries programme has continued to gather momentum despite concern that production is running behind schedule. Bombardier has attracted several high profile orders including 30 aircraft from Lufthansa (for Swiss European Air Lines

Airplane 0, named the 'Iron Bird', is effectively a structureless CS100 and integrates every non-fuel system. The rig can replicate in-service usage and replace actual flight hours on real aircraft.

Below left • Air Baltic's commitment for 10 CS300s, announced at the 2012 Farnborough International Airshow, was a much needed boost for the CSeries programme. The first examples are due for delivery in 2015.

Below • The CSeries programme continues to gather momentum with AirAsia CEO Tony Fernandes announcing at the 2012 Farnborough International Airshow that he was in preliminary talks to acquire up to 100 CS300 jets.





– see panel), though many observers have questioned the motives behind Bombardier's entry into the 100- to 149-seat sector. The manufacturer has cited right sizing and additional frequency as a means of covering growth rather than the use of larger aircraft.

Part of the narrowbody jet's appeal is its performance; it is expected to deliver double-digit reductions against both the 737 MAX and A320neo. In the case of the latter, the A319neo is the only direct, next-generation competitor to the CSeries. "Airlines have to make a choice – if they want a 20-year-old airframe with 20-year-old technology and a new engine, then they can buy the neo.

The CSeries production process is highly automated with over 93% of the fastenings on the aircraft done by computer controlled robots.

Above Right • Mirabel is home to three full-scale CSeries mock-ups including this example, which will be used to test the environmental control, pressurisation and lighting systems.

Bombardier is simultaneously developing the CS100 and larger CS300. The two aircraft share a 90% commonality.



Alternatively, they can take an entirely new design with the latest engines, systems and configuration that delivers a 20% saving," Boehm commented. "When we set out developing the CSeries, we were expecting to compete against a completely new design. However, this didn't happen [with both Airbus and Boeing deciding to re-engine existing models] so we are feeling very confident about attracting further orders."

The flexibility to alternate between the CS100 and CS300 has proved to be very attractive to customers who are replacing multiple aircraft types, while the ability to fly non-stop from London to New York has opened up the possibility of all-

Business class configured examples.

With plans to fly the first prototype by the end of this year, time is running short for Bombardier. The manufacturer has taken several unorthodox steps to meet its optimistic certification schedule though it has openly admitted that a three to six-month slip would be acceptable if required. The latest order from Air Baltic, announced at the Farnborough International Airshow 2012, is a much-needed boost for the programme, though if performance is as good as expected, rising fuel costs and a push for greater efficiency from airlines is almost certain to generate further customers for the CSeries. **W/A**

"WE HAVE BUILT MORE AIRCRAFT USING AN INTEGRATED SUPPLY CHAIN THAN BOTH AIRBUS AND BOEING."

Ben Boehm, Bombardier Vice President Business Development and Strategy Commercial Aircraft



Farnborough International Airshow 2012 DVD



This official DVD of the 2012 Farnborough International Airshow features a stunning flying display including the Qatar Airways Boeing 787 and Malaysian Airlines' Airbus A380. Also featured is Vulcan XH588, Boeing F.18 Super Hornet, Eurofighter Typhoon, Breitling Jet Team, The Red Arrows and much, much more!

Running time TBC. Region-free DVD. Cover and contents subject to change.

*Please note: £12.99 is a special pre-order price only available until 22 August 2012.

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Code: DVD475

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Air Dolomiti ATR42, ATR72 & BAe146 DVD



Air Dolomiti, founded in 1989, started operations in 1991 and is now part of the Lufthansa Group. The airline now operates more than 750 flights a week with a fleet of ATR-42s, ATR-72s and BAe146s. The airline's Head of Flight Operations takes you in the cockpit of the BAe146 for 3 flights to Milan and Naples from Munich.

Region-free DVD.

Running time: 186 minutes.

Code: DVD429

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Airbus A380 First Delivery DVD



Join AirUtopia as they cover the final year of flight testing of the Superjumbo A380 with stops in Colombia, Thailand, Vietnam, South Korea, America, Australia, the Philippines, the United Arab Emirates, concluding with the first aircraft delivery to Singapore Airlines in October 2007.

Region-free DVD.

Running time: 60 minutes.

Code: DVD507

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Swiss Airbus A340-300 DVD



Just Planes are delighted to return to Swiss International 9 years after they first featured this great airline. After covering flights to Asia and South America, this time they fly the A340-300 to North America and you're in for a fantastic flight packed with information and great views and ending with a spectacular scenic arrival into San Francisco!

Region-free DVD.

Running time: 256 minutes.

Code: DVD506

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Welcome to another exclusive extreme airport adventure as AirUtopia takes you deep into Vietnamese territory for some incredibly rare aviation action. All the best that Ho Chi Minh (Saigon), Hanoi and Da Nang airports have to offer is capped off by the first ever Airbus A380 visit to the country!

Region-free DVD.

Running time: 60 mins.

Code: DVD509

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Martinair MD-11 DVD



Dutch airline Martinair and their English-speaking crew welcome you on a round trip from Amsterdam to Palma de Mallorca. This remarkable three hour DVD edition has been produced to the 'Platinum' standard and provides a fascinating view of flying the world's only modern wide-cabin tri-jet airliner.

Region-free DVD.

Running time: 183 minutes,

Code: DVD481

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Scandinavian Airbus A330-300 DVD



Join the SAS flight crew for this transatlantic crossing on the widebody Airbus A330! This programme which runs more than 4 hours long, includes all the information you want about the aircraft, the route, oceanic crossings and much more!

Region-free DVD.

Running time: 247 Minutes.

Code: DVD474

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Buffalo Airways DC-4/C-46 DVD



Buffalo Airways was established over 40 years ago and is based in Yellowknife. The airline has become famous through the TV Show 'Ice Pilots' and World Air Routes is honoured to be welcoming Buffalo to their ever growing Flight in the Cockpit series! The aircraft you will fly in for this program is a piece of history, C-GCTF was built 65 years ago!

Region-free DVD.

Running time: 246 Minutes.

Code: DVD438

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Everts Air Cargo DC-6 DVD



This programme follows Everts Air Cargo DC-6 flights to half a dozen destinations across Alaska with its amazing scenery. You will also visit maintenance, operations, cargo and more.

Region-free DVD.

Running time: 181 Minutes.

Code: DVD445

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Channel Express A300F/F-27/ Electra DVD



Channel Express began operations in 1978. The Fokker 27 was added in the early 90s. In 1991 Channel Express was instrumental in placing the first Lockheed L-188 Electras on the British Register and in achieving ICAO Stage 3 noise certification of the type. In 1996 it took delivery of the first wide-body jets, an A300B4.

Region-free DVD.

Running time: 120 Minutes.

Code: DVD470

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A photograph of an Air Canada Boeing 777-300ER aircraft in flight, angled upwards. The aircraft is white with red and blue accents, including the Air Canada logo on the tail and the text 'AIR CANADA' and '777-300ER' on the fuselage. The background is a clear blue sky. The image is framed by a red border with the Air Canada logo in the top right corner.

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Running time: 90 minutes.

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Region-Free DVD.
Running time: 167 minutes.

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A photograph of an Austrian Airlines Boeing 777-200 aircraft on a runway. The aircraft is white with red and blue accents, including the Austrian Airlines logo on the tail and fuselage. The text "Austrian 777-200" is overlaid in red and blue at the top left. A red arrow points from the text towards the aircraft. The aircraft is shown from a low angle, emphasizing its size. The background is a clear sky. The bottom of the image shows a blue and red border with some text and a logo.

Region-Free DVD.
Running time: 167 minutes.

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cambrian AIRWAYS

Cambrian Air Services Ltd was founded in Cardiff on April 25, 1935 by S Kenneth Davies "to carry on business as an airline, aerodrome and airport operator" with a nominal capital of £10,000. A de Havilland DH60G Gypsy Moth biplane was initially used for light charters, pleasure flying and some military contract work in South Wales, but all operations were suspended at the outbreak of World War Two. As soon as civilian flying began again after the

Right • In the summer of 1950, the carrier had seven DH89A Dragon Rapides in service including, G-ALAT 'Anglesey'. (Bob O'Brien Collection)

Below • British Air Services was set up by BEA to operate the regional air services of Cambrian and BKS Air Transport (later to become Northeast Airlines). (Bob O'Brien Collection)

end of the hostilities, Cambrian resumed operations. It conducted the first post-war charter flight in Britain in January 1946 when one of its three Auster Autocrats, flown by chief pilot Captain Eric Symmons, transported a cargo of wire rope from Pengam Moors (Cardiff's post-war civil airport) to Bristol. In its early years, Cambrian once again used light aircraft, including a Percival Proctor, a Hendy Heck and three DH89A Dragon Rapides for passenger and freight charters, while its Austers were used for

pleasure flying from Broomhall airfield, close to the Butlin's holiday camp at Pwllheli in North Wales.

In May 1948 Cambrian and Western Airways became the first two airlines to be granted British European Airways (BEA) Associate Agreements for the operation of a number of scheduled services each day between Cardiff and Weston-Super-Mare. Western Airways used Avro Ansons while Cambrian flew Dragon Rapides. For the 1949 summer season, it operated the flights on its

Starting as a small air taxi and freight carrier in Wales, Cambrian Airways was eventually swallowed up into British Airways. Charles Woodley describes how.



THE WELSH DRAGON



"AFTER THE END OF THE WAR, CAMBRIAN RESUMED OPERATIONS AND CONDUCTED THE FIRST POST-WAR CHARTER FLIGHT IN BRITAIN IN JANUARY 1946."

own and was granted several other routes, including links to the Channel Islands. These were all seasonal and were suspended for the winter, but resumed for the summer of 1950 by which time the carrier had seven Dragon Rapides in service. These were also used for military contract work including army co-operation flights.

For the summer of 1951, rotations were operated from Cardiff to the Channel Islands, Liverpool and Weston-Super-Mare, and between Cardiff and

Liverpool, while a Haverfordwest-Swansea-Cardiff-London link was also flown. That year, Cambrian flew 328,460 revenue miles and employed a staff of 40, including eight pilots. The following year it flew over one million revenue miles for the first time.

There was more expansion in February 1953, when Cambrian purchased part of the redundant fleet of Olley Air Services, taking over its routes from Bristol to the Channel Islands from April 1. The >>





Above • By 1954, DH104 Doves were in operation on the routes from Cardiff and Bristol to Paris and the Channel Islands. This promotional image shows G-AIWF. (Via Garry Hillard)

Left • Publicity photograph of Cambrian DH114 Heron G-AOGO over the Clifton Suspension Bridge near Bristol. (Via Garry Hillard)

airline also bought out Gloucester-based Murray Chown Aviation and its services from Staverton to the Channel Islands while also taking over operation of the airport.

In 1953, joint managing directors were appointed – Wing Commander L B Elwin and W W Stanley – and that summer, services were flown from Southampton to Paris with connecting flights from Bristol, Cardiff and Staverton. A Cardiff to Dinard service was also started. Early in 1954, the Cardiff services from Pengam Moors were transferred to the newly-opened airport at Rhoose. The old facility's 2,900ft (884m) runway was still long enough for the Dragon Rapides but not the larger aircraft in prospect. DH104 Doves were now in operation on the routes from Cardiff and Bristol to Paris and the Channel Islands and in November that year, they were joined by two Douglas DC-3 Dakotas.

Change of name

To reflect its main business, the company's name was changed slightly to Cambrian Airways in May 1955 and, with growth in mind, two new DH114 Heron Series 2s were acquired the following year. One of these inaugurated a twice-weekly service from Cardiff and Bristol to Belfast in May – just prior to the carrier signing a ten-year operating agreement with BEA which resulted in more new routes being announced: from Liverpool and Manchester to Jersey, via Bristol and Cardiff.

By the summer of 1956 Cambrian had retired all its Dragon Rapides from passenger services but retained one for use as a company transport. Dakotas were now used almost exclusively on scheduled services, and in November 1956 they joined aircraft from many other British independent airlines for the airlift of refugees from Austria to

"ON FEBRUARY 7, 1958 BEA TOOK A ONE-THIRD INTEREST IN THE AIRLINE WITH THE INTENTION OF STRENGTHENING THE INTEGRATION OF SERVICES BETWEEN THE TWO."

the UK following the unsuccessful anti-Soviet uprising in Hungary. The Dakotas flew from Blackbushe (to the south-west of London) to Linz and Vienna, carrying blankets and medical supplies on the outbound leg and refugees on the return journey. The early flights were provided free of charge, and by the time the airlift ended on December 14, the DC-3s had completed 16 round trips.

Cambrian terminated its involvement with Staverton Airport in 1957 but began operating between Swansea and Jersey with its Herons on June 1. This was also the date of the official opening of Swansea's new airport on the site of the former RAF Fairwood Common, and it was agreed that Cambrian would manage the airport on behalf of Swansea Corporation. During that year over 40,000 passengers were carried on its scheduled services.

On February 7, 1958 BEA took a

Far right • Douglas DC-3 Dakota G-ALXL just arriving on stand at Manchester Airport in August 1968. (author)



one-third interest in the airline with the intention of strengthening the integration of services between the two, but Cambrian sustained heavy losses during the year, and at the end of the summer season all its aircraft were placed into storage and advertised for sale. That winter, all services remained suspended except for Manchester-Cardiff-Bristol-Jersey flights which used Herons, operated on its behalf by Jersey Airlines. However, after discussions with BEA it was agreed that Cambrian would lease three Dakotas from the national carrier in order to restart operations in the spring of 1959. So, after a period of crew training, the Cardiff-Bristol-Jersey and Cardiff-Bristol-Southampton-Paris services were reopened on March 23.

The next two years were spent consolidating the existing route network. During 1960 the leased Dakotas were purchased from BEA and almost 55,000 passengers were carried. More Dakotas were added the following year bringing the fleet up to eight, and on October 16, 1961 Dakota G-AMFV inaugurated operations into the newly-opened airport at Cork in Ireland. Cambrian was the first British airline to operate to Cork, with scheduled services from Bristol, Cardiff and London.

New routes and turboprops

The only new route started in 1962 was from Glasgow to Cardiff via Manchester and Bristol, but early the following year, major expansion was announced when BEA revealed it was transferring its services linking

Liverpool, Manchester and London to the Isle of Man to Cambrian operations. A fleet of Vickers Viscount 701s was acquired from the national carrier to operate this new network, becoming the first turboprops to be used by Cambrian. In January 1966, five more were purchased from Channel Airways to bring its total fleet to eleven. The first commercial service to be operated by a Cambrian Viscount was actually a charter flight carrying Welsh rugby supporters from Cardiff to Edinburgh on February 2, 1963 for the international match against Scotland. From that point onwards rugby supporters' flights were to become a regular fixture, carrying Welsh fans to matches in Paris, Dublin and Edinburgh.

The Viscounts actually entered service on the scheduled network on February

20, with a Cardiff-Bristol-Dublin service operated by G-AMOP. Their acquisition also allowed Cambrian to expand its inclusive tour (IT) flight operations and undertake an extensive programme of flights on behalf of Hourmont Holidays. By 1964, weekend charters were being operated from Cardiff via Bristol to Barcelona, Nice, Ostend, Palma, Rimini, Valencia, Venice and Zagreb; and from Exeter to Palma. An additional Dakota service was flown on Sundays from Swansea to Ostend. The Viscounts were routinely used on nightly newspaper and cargo contract flights from Liverpool to Belfast and the Isle of Man and Cambrian also acted as handling agents for the Irish carrier Aer Lingus' newspaper flights from Liverpool to Dublin on Saturday nights.

Top left • The company name was revised slightly to Cambrian Airways in May 1955 and, with growth in mind, two new de Havilland DH114 Heron Series 2s were acquired including G-AOGU. (Bob O'Brien Collection)

Above left • In 1967 Douglas DC-3 Dakota G-AHCZ was refurbished internally with 24 Hawker Siddeley Trident-type seats, a full galley and extra soundproofing at a cost of £12,000 to assess passenger reaction with a view to updating the rest of the Dakotas in the same way. (Bob O'Brien Collection)





It was while operating a cargo flight from the Isle of Man that Viscount G-AMOL was lost on July 20, 1965. The aircraft unfortunately crashed into a factory on final approach to Liverpool with the loss of both crew and two people on the ground.

During 1966, Cambrian's Dakotas continued to operate holiday services out of Swansea to the Channel Islands and Dublin. A year later, one example (G-AHCZ) was refurbished internally with 24 Hawker Siddeley Trident-type seats, a full galley and extra soundproofing at a cost of £12,000 to assess passenger reaction with a view to updating the rest of the Dakotas in the same way. The inaugural 'Super-Pionair' service was operated from Cardiff to Paris on October 27, 1967, but no further conversions were carried out.

Earlier in the year, on July 15, 1967 Viscount G-AMOE arrived at Liverpool from the Isle of Man with suspected hydraulic problems. Engineers worked on

BEA revealed it was transferring its services linking Liverpool, Manchester and London to the Isle of Man to Cambrian operations. A fleet of Vickers Viscount 701s was acquired from the national carrier, including G-AMOE, pictured on final approach in Cambrian's early livery. (Ralf Mantussen)

the problem and then carried out taxiing tests, during which the brakes failed and the aircraft clipped the wing of a parked Aer Lingus Viscount before ending up with its nose poking through the doors of one of the boarding gates at the terminal.

In November 1967 Cambrian became a wholly-owned subsidiary of British Air Services, the company set up by BEA to operate the regional air services of Cambrian and BKS Air Transport (later to become Northeast Airlines). This led

to greater integration of the operations of both airlines, part of which was the transfer of all Viscount maintenance to the Cambrian facility at Cardiff (Rhoose). The services from Swansea were run down during the late 1960s and the last Dakota was retired on October 31, 1968 after G-ALCC had flown an evening service from Paris to Bristol and Cardiff.

When British Eagle International Airlines suddenly ceased operations in November 1968, Cambrian immediately

Right - From July 1970 former BEA Viscount 806s - including G-AOYG - were acquired to replace the ageing Viscount 701s, the last of which were withdrawn at the end of 1971. (Ralf Mantussen)



took over the failed airline's routes from Liverpool to Glasgow, Chester and London on a temporary permit until the licences were formerly transferred.

The carrier's first jet aircraft, a British Aircraft Corporation (BAC) One-Eleven, G-AVOF, was delivered in December 1969, and after crew training sorties the airline operated its first scheduled jet service the following March. The decision to acquire jets coincided with the formation in May 1969 of a new associate company called Cambrian Air Holidays, set up in conjunction with Thomas Cook and Sons and Lunn-Poly Travel to operate IT holidays from Bristol and Cardiff to destinations in Spain such as Alicante, Ibiza and Palma.

On January 19, 1970 another Viscount was lost when G-AMOA was damaged beyond economic repair in a heavy landing at Cardiff but fortunately there were no injuries among the 63 occupants.

For the 1970 summer season, three One-Elevens were in service, operating scheduled services from Heathrow to Cork, the Isle of Man and Liverpool, and from Liverpool to Dublin.

One example was even based in West Berlin, operating internal German services on behalf of BEA.

From July 1970 former BEA Viscount 806s were acquired to replace the ageing Viscount 701s, with the last of these withdrawn at the end of 1971. Most were scrapped, but two examples were repainted in British Overseas Airways Corporation (BOAC) livery and used on feeder services from Belfast, Edinburgh and Aberdeen to Prestwick to connect with BOAC transatlantic services.

This de Havilland Dragon Rapide is now on display outside the Marriott Hotel at Speke – the old Liverpool Airport Terminal. (Bob O'Brien Collection)

"THE CARRIER'S FIRST JET AIRCRAFT, A BAC ONE-ELEVEN, WAS DELIVERED IN DECEMBER 1969."

Below - The carrier's first jet aircraft, a BAC One-Eleven, G-AVOF (c/n 131), was delivered in December 1969 and operated the carrier's first scheduled jet service on March 9, 1970. By 1972, it had been painted in this 'orange-top' livery. (Ralf Mantussen)

Meanwhile, G-ALWF, the oldest surviving Viscount, was saved for posterity. This historic aircraft flew its last official revenue service on Christmas Eve 1971, but took to the air again on April 12, 1972 on a special flight from Cardiff via Heathrow to Liverpool, where it was ceremonially handed over to the Lord Mayor for intended public display at Liverpool Airport. However, following a change of plan, it eventually found a permanent home among the collection of historic airliners at Duxford, UK and was repainted in its original BEA livery. (See *Airliner World* August 2009.)

During 1972, one of the One-Elevens was stationed at Gatwick for the summer to operate tour services to Dubrovnik on

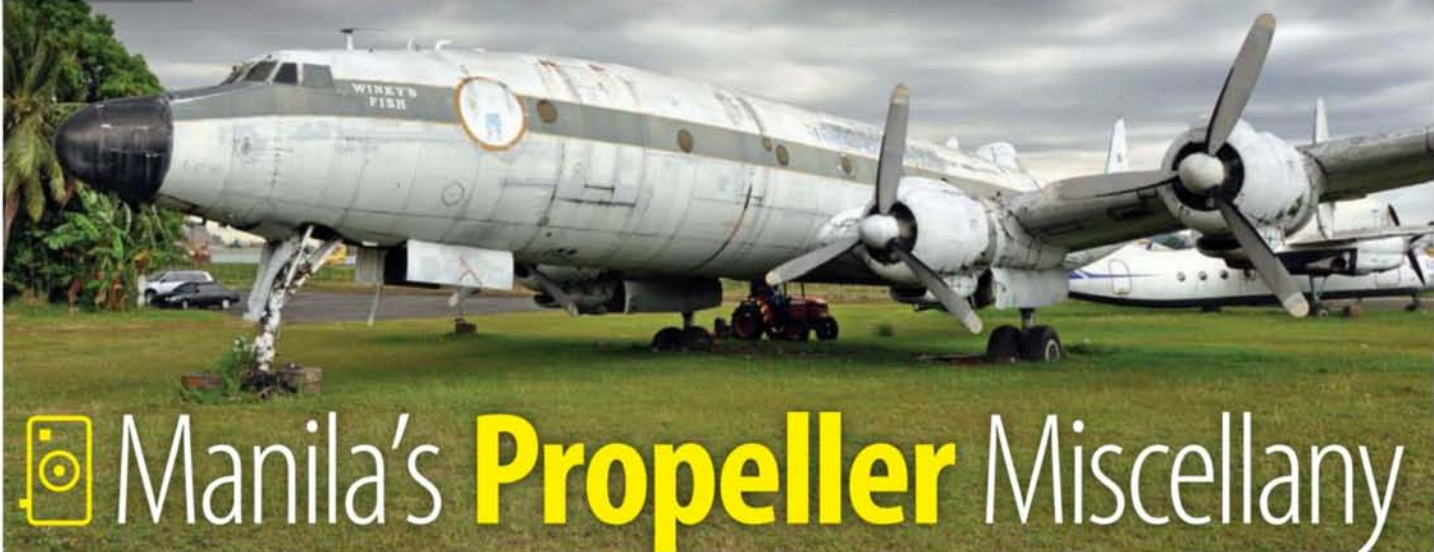
behalf of BEA Airtours. But the end for the carrier – in name at least – was close at hand. On April 1, 1972 it came under the control of the newly-formed British Airways Board; and on September 1 it became part of the Regional Divisional of British Airways, and the name and distinctive dragon emblem were consigned to the history books. **W/A**

The author would like to thank Ralf Mantussen, Dietrich Eggert and Garry Hillard for supplying images. For further Cambrian images and nostalgia, readers are recommended to visit Garry Hillard's excellent Cambrian Airways website: www.cambrianairways.org.uk



Formerly belonging to the World Fish and Agricultural Corporation – aka 'Winkys Fish' – Lockheed C-121J Super Constellation, N4247K (c/n 4144), has been stored at Manila since at least 1988.

The smaller airlines at Manila's Ninoy Aquino International Airport in the Philippines operate a wide variety of propeller types – some of which have probably reached the end of their useful lives, as **Richard Vandervord** discovered.



Manila's **Propeller** Miscellany

The airport used to have a number of active NAMC YS-11s based, but sadly no more. This example, RP-C3587 (c/n 2069) with BIMP-EAGA Air Alliance titles is slowly being dismantled.



Regional carrier airphilxpress.com has a growing fleet of Airbus A320s and Bombardier Dash 8s – including -Q314 RP-C3017 (c/n 657).



It is rare to see three Britten-Norman BN-2A Mk III Trislanders in the same place. This example, C-GOXZ (c/n 361) of Pinoy Air sits alongside (at least) one UK-registered example.



Island Transvoyaer Inc (ITI) has three Dornier Do-228-212s on its books, although, RP-C2289 (c/n 8177) 'Swiftlet' did not have any propellers in early 2012.



This ex-United States Air Force de Havilland Canada DHC-4 Caribou (C-7), RP-C2702 (c/n 098), arrived in the Philippines in 2001. It operated with Jan's Helicopter Services before being stored at Manila's Ninoy Aquino Airport – although in reasonably good condition.



This Beech Super H18 TriGear, RP-C9842 (c/n BA-750), belongs to CM Aero Services and is still in gainful employment as a freighter carrying fish.



Although possibly never having flown with Zest Air, DHC-7-102, RP-C2915 (c/n 092) wears the carrier's full colours and appears to be in storage following its sale by Asian Spirit.



Airliner Deliveries

The latest commercial aircraft deliveries from manufacturers and lessors.

Seen at Manchester Airport in June, National Airlines Boeing 747-428BCF, N952CA (c/n 25238), arrived from Riga and departed to Philadelphia. It has until recently flown with the registration TF-NAC. (Charles Cunliffe)



AIR ARABIA [G9/ABY 'ARABIA']

A6-ANU A320-214 5143 ex D-AVVF, dd 10.05.12

EMIRATES AIRLINE [EK/UAE]

A6-EGP B777-31HER 35599 dd 08.05.12

A6-EGQ B777-31HER 41076 dd 16.05.12

A6-EGR B777-31HER 41077 dd 30.05.12

QATAR AIRWAYS [QR/QTR 'QATARI']

A7-AHU A320-232 5127 ex F-WWDT, dd 24.05.12

AIR CHINA [CA/CCA]

B-2031 B777-39LER 38670 dd 22.05.12

B-6881 A320-214 5174 ex D-AXAQ, dd 31.05.12

CHENGDU AIRLINES [EU/UEA 'UNITED EAGLE']

B-6940 A320-214 3706 ex OE-IAC, dd 05.12, lsd fr GECAS

CHINA EASTERN AIRLINES [MU/CES]

B-6876 A320-232 5134 ex D-AVVF, dd 07.05.12, lsd fr ALC

B-6877 A320-232 5144 ex D-AVVL, dd 10.05.12, lsd fr ALC

B-6878 A320-214 4938 ex B-S06L, dd 09.05.12

B-6879 A320-214 4946 ex B-S07L, dd 16.05.12

B-6880 A320-214 4967 ex B-S08L, dd 25.05.12

B-6893 A320-214 5136 ex D-AVVG, dd 08.05.12, lsd fr ACG

CHINA SOUTHERN AIRLINES [CZ/CSN]

B-3138 E190-100LR 0539 dd 09.05.12, lsd fr CDB Leasing

B-3139 E190-100LR 0548 ex PT-TBO, dd 26.06.12, lsd fr CDB Leasing

B-5643 B737-81B 38920 dd 10.05.12

B-6547 A320-223 1309 ex F-WWVK, dd 10.05.12

HAINAN AIRLINES [HU/CHH]

B-5662 B737-84P 38152 dd 21.05.12

B-6903 A320-214 5117 ex F-WWBH, dd 14.05.12, lsd to Tianjin Airlines

LUCKY AIR [BL/LKE]

B-5292 B737-7V3 30676 ex N171LF, dd 08.06.12, lsd fr ILFC

SHANDONG AIRLINES [SC/SCG]

B-5648 B737-85N 38639 dd 08.05.12

SHENZHEN AIRLINES [4G/CSZ 'SHENZHEN AIR']

B-5670 B737-87L 39129 dd 08.05.12

SICHUAN AIRLINES [3U/CSG]

B-6906 A321-231 5160 ex D-AVZF, dd 29.05.12

TIANJIN AIRLINES [GS/GCR 'CHINA DRAGON']

B-6903 A320-214 5117 ex F-WWBH, dd 14.05.12, lsd fr Hainan Airlines

CATHAY PACIFIC AIRWAYS [CX/CPA]

B-KPJ B777-367ER 36157 st ALC 06.12 & lsd back

B-KQB B777-367ER 39235 dd 07.05.12

HONG KONG AIRLINES [HX/CRK 'BAUHINIA']

B-LPC A320-214 5147 ex F-WWBR, dd 16.05.12

EVA AIRWAYS [BR/EVA]

B-16311 A330-203 693 repainted into special 'Hello Kitty' colours 05.12

ADVENTURE AIR

C-GSFA Ce 208 00212 ex 8Q-MAT

AIR INUIT [3H/AIE]

C-FEAI Dash 8-314 334 ex G-WOWB, reg'd 06.06.12, lsd fr Avmax

C-GIAB Dash 8-311 296 ex G-WOWA, reg'd 04.06.12

ALBERTA CITYLINK [ABK]

C-GZOS JS 3112 796 ex N424UE

ALKAN AIR [TO/AKN]

C-FAKV Ce 208B 1008 ex N961TP, reg'd 04.06.12

AVIATION COMMERCIAL AVIATION

C-GUCA Pa-31 350 05077 ex N2NS, reg'd 01.06.12

BRUCELANDAIR INTERNATIONAL

C-GFON Pa-31T 20070 ex N2469V, reg'd 19.06.12

CALM AIR INTERNATIONAL [MO/CAV]

C-ATR 42-320 197 ex SX-BIC, dd 05.12



CANADIAN NORTH [ST/ANX 'EMPRESS']

C-GCNK B737-36Q 29189 ex N892AG, reg'd 19.06.12, lsd fr ACG

CONAIR

C-GQVC Ce 208B 2262 ex N262GC, bf Prairie Aircraft Sales 31.05.12

HAWK AIR AVIATION [BH]

C-FYDH Dash 8-102 083 ex N809LR, reg'd 19.06.12, lsd fr Avmax

ISLAND EXPRESS AIR

C-GROJ Pa-31 350 05249 reg'd 13.06.12

JAZZ AIR (AIR CANADA EXPRESS) [QK/JZA 'JAZZ']

C-GGMI Dash 8-Q402 4413 dd 28.06.12

C-GGMN Dash 8-Q402 4405 dd 16.06.12

C-GGMQ Dash 8-Q402 4403 dd 18.05.12

KELOWNA FLIGHTCRAFT [KW/KFA]

C-GPOY CV-580 7 ex HP-1445, dd 03.05.12

KISSISSING LAKE LODGE

C-FSAP Noorduyn Norseman Mk VI 231

PASCAN AVIATION [PP/PSC]

C-GPEB ATR 42-300 122 ex D-BCRO, reg'd 28.06.12

SILOUX AIR

C-GFDS DHC-2 1269 ex N31343

VOYAGEUR AIRWAYS [4V/VAL]

C-GRWO CRJ100 7024 ex N42WA, reg'd 06.06.12

WEST WIND AVIATION [WEW]

C-GWEA ATR 42-320 240 ex D2-FLA

LAN AIRLINES [LA/LAN]

CC-CXD B767-316ER 35697 ex HC-CJX, ret fr LAN Ecuador, ops services for all LAN group airlines

ex HC-CKY, ret fr LAN Ecuador, ops services for LAN Ecuador (LNE) & LAN Peru (LPE)

SERVICIOS AÉREOS RÍO BAKER

XA-TWT B737-2H4 21812 ex XA-TPW, dd unk date, lsd fr Global Air

AEROSUR [SL/RSU]

CP-2711 B747-475 25422 ex LV-ALJ

AIR ALLIANCE EXPRESS [AYY]

D-FLEC Ce 208 00388 ex N68FE

AIR BERLIN [AB/BER]

D-ABAP B737-86J 28070 repainted into SunExpress colours, sub-ld to SunExpress Germany

repainted into SunExpress colours, to Munich 24.05.12

ex D-AVZD, dd 02.05.12

dd 23.05.12, oneworld

D-ABAR B737-86J 28072

D-ABCK A321-231 5133

D-ABME B737-86J 37766

EUROPEAN AIR TRANSPORT [QY/BGS 'EUROTRANS']

N2617 A300B4-622R 617 ferried Lourdes – Dresden 25.05.12 for cargo conversion

cnvrt'd to A300B4-622R(F) at Dresden 05.12, rr D-AEAT

ferried Lourdes – Dresden 26.05.12 for cargo conversion

N4602 A300B4-622R 602

LUFTHANSA [LH/DLH]

D-ABYA B747-830 37827 named 'Brandenburg'

D-AIBC A319-112 4332 named 'Siegburg'

D-AIBG A319-112 4841 named 'Kirchheim unter Teck'

D-AIKR A330-343X 1314 ex F-WWSD, dd 31.05.12

ex F-WWSR, dd 14.05.12

ferried Sofia – Hamburg 06.05.12 for rts after temp storage, ex LH Italia

ferried Sofia – Hamburg 04.05.12 for rts after temp storage, ex LH Italia

rts after temp storage

D-AKNI A319-112 1016

LUFTHANSA CITYLINE [LH/CLH]

D-AEBO E190-200LR 0542 ex PT-TAU, dd 22.05.12

D-AECB E190-100LR 0332 named 'Meißen'

SUNEXPRESS GERMANY [XG/SXD]

D-ASXK B737-86J 28070 ex D-ABAP, dd 22.06.12, sub-ld fr Air Berlin

TUIFLY.COM [X3/TUI 'TUIJET']

D-AHFV B737-8KS 30882 ret fr Air Berlin

PACIFIC SUN [PI/PIA]

DQ-PSE DHC-6-300 410 ex N974SW

AIR NOSTRUM [YVANE 'NOSTRU AIR']

EC-LRR ATR 72-600 1023 ex F-WWLQ, dd 06.06.12, lsd fr NAC

ALBA STAR

EC-LAV B737-408 24352 named 'Pino D'Urso'

CANAIR

EC-JBI ATR 72-212A 713 ex F-WWEM

GOODFLY

SX-BRM Fokker 50 20207 ex PH-KVF, dd 31.05.12, wet sub-ld fr Minoan Air

IBERIA EXPRESS [I2/IBS]

EC-FCB A320-211 0158 ex EC-579, dd 01.06.12

dd 29.04.12

EC-FGV A320-211 0207 dd 12.05.12

EC-FQY A320-211 0356 ex EC-886, dd 01.05.12

ex F-WWIK, dd 01.06.12, rr EC-LRG

ex EC-HDP, dd 25.03.12

ORBEST ORIZONA [TY/OWD]

EC-LRT A320-214 3933 ex VT-WAQ, ret fr GoAir

Key to Abbreviations

| | |
|---------|---|
| a/c | aircraft |
| als | airlines |
| awys | airways |
| bf | bought from |
| b/u | broken up/scrapped |
| canx | cancelled |
| cls | colours |
| cn | manufacturer's construction/serial number |
| cnvrt'd | converted |
| dbf | destroyed by fire |
| dbf | damaged beyond repair |
| dd | delivery date |
| ex | previous reg'n |
| ff | first flight |
| frtr | freighter |
| lfr | last revenue flight |
| lsd fr | leased from |
| lsd to | leased to |
| msn | see cn |
| ntu | not taken up |
| oo | on order |
| op | operated |
| pax | passenger |
| pwfu | permanently withdrawn from use |
| reg'd | registered |
| reg'n | registration |
| ret fr | returned from |
| ret to | returned to |
| rr | re-registered |
| rts | return to service |
| sb | sold by |
| scr | scrapped/broken up |
| st | sold to |
| std | stored |
| tba | to be advised |
| unk | unknown |
| wfu | withdrawn from use |
| w/o | written off/destroyed |

We welcome any feedback on this listing.

(The listing is alphabetical with reference to the registration of the country of origin.)

| VOLOTEA AIRLINES [V7/VOE] | | | |
|---|--------------|--------|--|
| EI-EWJ | B717-2BL | 55171 | dd 17.05.12, lsd fr Boeing |
| VUELING AIRLINES [VY/VLG] | | | |
| EC-JFH | A320-232 | 2104 | named 'Vueling rocks my world' ex EI-EUC, dd 18.05.12, lsd fr ILFC |
| EC-LRM | A320-232 | 1349 | ex EI-EUC, dd 18.05.12, lsd fr ILFC |
| EC-LRN | A320-214 | 3995 | ex D-ABDX, dd 22.05.12 |
| EC-LRS | A319-112 | 3704 | ex D-ABGR, dd 26.05.12, lsd fr BOC |
| IRAN AIR TOURS [B9/IRB] | | | |
| UR-CJO | A320-231 | 0354 | ex N354BV, dd 05.12, lsd fr Khors Air |
| ZAGROS AIRLINES [ZV/ZGZ] | | | |
| EP-ZAC | MD-83 | 49949 | ex UR-COR, dd 03.12, lsd fr Khors Air |
| BELAVIA [B2/BRU] | | | |
| EW-336PA | B737-3Q8 | 26312 | ex VQ-BHD, dd 19.06.12, lsd fr ILFC |
| MAHAN AIR [W5/IRM] | | | |
| EX-27000 | BAe 146-300 | E3216 | rr EP-MOA |
| UR-CJJ | BAe 146-300 | E3165 | rr EP-MOC |
| NASAIR [UE/NAS] | | | |
| E7-SKA | A320-231 | 0428 | ex EY-623, 05.12, lsd fr Sky Bosnia |
| AIR RAROTONGA [GZ] | | | |
| ES-TAL | Emb. 110P2 | 110245 | ex H-UQA |
| SKY BOSNIA [SBN] | | | |
| E7-SKB | A320-212 | 0325 | ex EK32003, dd 07.05.12, lsd fr Kyrgyzstan Airlines |
| AIR FRANCE [AF/AFR] | | | |
| F-GSQA | B777-328ER | 32723 | new owner Aircraft 77B-32723 Inc (ILFC) 08.08.11 |
| F-GUOB | B777-F28 | 32965 | purch off lease fr BOC 10.11 |
| F-GUOC | B777-F28 | 32966 | purch off lease fr BOC 10.11, st SL ALPS Ltd 08.12.11 & lsd back |
| F-GZNN | B777-328ER | 40376 | dd 15.05.12, st West Hope Leasing Co Ltd & lsd back |
| F-HBNL | A320-214 | 5129 | ex F-WWBB, dd 21.05.12, st Chishima Real Estate Co Ltd & lsd back |
| F-HPJH | A380-861 | 099 | ex F-WWAF, dd 02.05.12, st SNC Capucine Bail & lsd back |
| EUROPE AIRPOST [50/FPO 'FRENCH POST'] | | | |
| F-GZTJ | B737-453(F) | 25595 | ex N595AG, dd 25.05.12, lsd fr ACG |
| REGIONAL - COMPAGNIE AERienne EUROPEENNE [YS/RAE] | | | |
| F-HBXL | E170-100LR | 0009 | ex EI-DFH, reg'd 22.06.12, lsd fr Aldus Portfolio Leasing |
| F-HBXM | E170-100LR | 0010 | ex EI-DFI, reg'd 07.06.12, lsd fr Aldus Portfolio Leasing |
| BLUE ISLANDS [SI/BCI] | | | |
| G-EIGG | JS 3102 | 773 | ex SE-LGH, dd 08.05.12, lsd fr Links Air |
| BRISTOW HELICOPTERS [UH/BHL] | | | |
| G-CHBY | Agusta AW139 | 13130 | ex OY-HLB, reg'd 16.05.12 |
| G-CHHF | S-92A | 920158 | ex N158G, reg'd 27.06.12 |
| G-ZZSH | EC-225LP | 2723 | ex VH-ZFH, reg'd 23.05.12, ret fr Bristows Australia |
| CHC SCOTIA | | | |
| G-CHCV | Agusta AW139 | 41005 | ex UP-AW907, reg'd 41005, ret off lease |

| G-CHCY | AS.332L2 | 2398 | ex D2-EVP, reg'd 23.05.12, lsd fr CHC Global |
|--|--------------|--------|--|
| G-LOWC | Agusta AW139 | 31418 | reg'd 28.05.12 |
| G-MGAR | Agusta AW139 | 31414 | reg'd 28.05.12 |
| EASTERN AIRWAYS [T3/EZE 'EASTFLIGHT'] | | | |
| G-EMBP | ERJ 145EU | 145300 | ex PT-SKR, dd 31.05.12, lsd fr Aircraft Solutions LLC |
| EASJET AIRLINE [U2/EZY 'EASY'] | | | |
| G-EZUU | A320-214 | 5150 | ex D-AXAA, dd 11.05.12 |
| G-EZUX | A320-214 | 5138 | ex D-AVWH, dd 15.05.12 |
| G-FBJG | E170-200STD | 0344 | ex PT-TCY, dd 27.06.12 |
| JET2 [LS/EXS 'CHANEX'] | | | |
| G-GDFL | B737-36N | 28568 | ex OO-VEG, reg'd 22.06.12 |
| G-LSAN | B757-2K2 | 26635 | ex HC-CIV, reg'd 30.05.12 |
| MANX2 [NM/BPS 'BASE'] | | | |
| G-JIBO | JS 3102 | 711 | ex G-OJSA, dd 10.05.12, lsd fr Links Air |
| G-LNKS | J 3102 | 772 | ex G-JURA, dd 17.05.12, lsd fr Links Air |
| THOMAS COOK AIRLINES [MT/TCS 'KESTREL'] | | | |
| OY-VKF | A330-243 | 309 | ex G-CSJS, dd 28.04.12, lsd fr Thomas Cook Scandinavia |
| YL-LCI | A320-214 | 0724 | ex F-WTAQ, dd 01.05.12, sub-lsd fr SmartLynx |
| THOMSON AIRWAYS [BY/TOM] | | | |
| G-TAWJ | B737-8HX | 38108 | dd 08.05.12, lsd fr ACG |
| TITAN AIRWAYS [T4/AWC 'ZAP'] | | | |
| G-POWH | B757-256 | 29308 | ex TC-OGT, reg'd 18.06.12 |
| TRAVEL SERVICE HUNGARY [TVL 'TRAVELAIR'] | | | |
| HA-LKB | B737-86Q | 30294 | ex C-GRKB, ret fr Sunwing |
| WIZZ AIR [W6/WZZ] | | | |
| HA-LWP | A320-232 | 5139 | ex F-WWII, dd 18.05.12 |
| SWISS INTERNATIONAL AIRLINES [LX/SWR] | | | |
| HB-JLS | A320-214 | 5069 | named 'Niederhasli' |
| HB-JMM | A340-313X | 154 | named 'Solothurn' |
| ZIMEX AVIATION [C4/IMX] | | | |
| HB-LPY | DHC-6 400 | 851 | ex VH-ZZH, reg'd 21.06.12 |
| TAME LINEA AEREA DEL ECUADOR [EQ/TAE] | | | |
| HC-CMO | A319-112 | 0946 | ex F-WTBM, dd 29.05.12, lsd fr GECAS |
| AVIANCA - AEROVIAS NACIONALES DE COLOMBIA [AV/AVA] | | | |
| N915AV | A320-214 | 5195 | ex D-AVVK, dd 07.05.12, in Star Alliance colours |
| ASIANA AIRLINES [OZ/AAR] | | | |
| HL8256 | A321-231 | 5169 | ex D-AVZH, dd 25.05.12, lsd fr ALC |
| KOREAN AIR [KE/KAL] | | | |
| HL8248 | B737-98SER | 37635 | dd 18.05.12 |
| AIR PANAMA [7P/PST] | | | |
| HP-1764PST | Fokker 100 | 11364 | ex F-GIOG, dd ex-Woensdrecht 11.06.12 |
| COPA AIRLINES [CM/CMP] | | | |
| HP-1822CMP | B737-8V3 | 40779 | dd 15.05.12 |
| HP-1823CMP | B737-86N | 39398 | dd 29.05.12, lsd fr GECAS |
| NOK AIR [DD/NOK] | | | |
| HS-DBD | B737-8AS | 33821 | ex N338CR, dd 09.05.12, lsd fr Chishima Real Estate |
| ORIENT THAI AIRLINES [OX/OEA] | | | |
| HS-STB | B747-441 | 24956 | ex PK-GSI, bf ILFC 06.12 |
| SGA AIRLINES / NOK MINI [SE/SGN] | | | |
| HS-GBF | Saab 340N | 449 | ex N449XJ, dd 22.05.12, lsd fr Lambert Leasing |

| THAI AIRWAYS INTERNATIONAL [TG/THA] | | | |
|--|-------------|-------|--|
| HS-TGH | B747-4D7 | 24458 | cnvrt'd to B747-4D7BCF by TAECO, dd ex-Xiamen |
| SAUDI ARABIAN AIRLINES [SV/SVA] | | | |
| HZ-AKA | B777-268ER | 28344 | repainted into SkyTeam colours |
| SOLOMON AIRLINES [IE/SOL] | | | |
| HA-AAJ | BN-28 26 | 2154 | ex T3-VIN, dd 04.11, lsd fr Colville Aviation |
| AIR ITALY [I9/AEY] | | | |
| EI-IGN | B737-84P | 35074 | ex SP-IGN, ret fr Air Poland |
| ALITALIA [AZ/AZA] | | | |
| EI-EJM | A330-202 | 1308 | ex F-WWKH, dd 14.05.12, lsd fr Airbus Financial |
| EI-EIN | A330-202 | 1313 | ex F-WWYM, dd 29.05.12, lsd fr Airbus Financial |
| EI-IMU | A319-111 | 5130 | ex D-AVYA, dd 22.05.12, lsd fr GY Aviation Lease 103 Co Ltd, named 'Pietro Veni' to be renamed 'Parco Nazionale d'Abruzzo Lazio e Molise' painted in SkyTeam colours |
| EI-RDD | E170-100STD | 0334 | named 'Parco Nazionale della Sila' |
| EI-RND | E190-100STD | 0512 | |
| EI-RNE | E190-100STD | 0520 | |
| LIVINGSTON (NEW LIVINGSTON) [JN/NVL] | | | |
| EI-EUA | A320-232 | 2210 | ex EC-IVG, dd 30.05.12, lsd fr Airspeed Ireland Leasing |
| MISTRAL AIR [7M/MSA] | | | |
| EI-BUE | B737-348QC | 23810 | ex F-GIXL, dd 07.06.12, lsd fr Automatic |
| EI-ETT | B737-4KS | 24125 | ex CN-RPC, dd 09.05.12, lsd fr Fatewood |
| AIRASIA JAPAN [JW] | | | |
| JA8384 | A320-211 | 0151 | ex F-WWDR, dd 16.04.12, lsd fr ANA |
| ANA - ALL NIPPON AIRWAYS [NH/ANA] | | | |
| JA206A | A320-214 | 3147 | lsd fr Mitsui Sumitomo Trust |
| JA207A | A320-214 | 3148 | Panasonic Finance as JA206A |
| JA742A | B777-281ER | 40901 | dd 23.05.12 |
| IBEX AIRLINES [FW/IBX] | | | |
| JA08RJ | CRJ700 | 10333 | ex C-GIAR, dd 28.05.12 |
| JAL EXPRESS [JC/JEX 'JANEX'] | | | |
| JA343L | B737-846 | 39162 | dd 30.05.12 |
| JETSTAR JAPAN [GK] | | | |
| JA02JJ | A320-232 | 5145 | ex F-WWIL, dd 23.05.12, lsd fr Qantas |
| SKYMARK AIRLINES [BC/SKY] | | | |
| JA73NP | B737-8HX | 38109 | dd 15.05.12, lsd fr ACG |
| EZNIIS AIRWAYS [EF/EZA] | | | |
| JU-9921 | B737-7V3 | 29360 | ex N201LF, dd 16.06.12, lsd fr ILFC |
| MONGOLIAN AIRLINES GROUP [MR/MML 'TRANS MONGOLIA'] | | | |
| JU-888 | A319-112 | 1706 | named 'Great Mongol' |
| ROYAL JORDANIAN AIRLINES [RJ/RJA] | | | |
| JY-AYU | A320-232 | 5128 | ex D-AVVE, dd 24.05.12, lsd fr AWAS, |
| SVG AIR [SVD] | | | |
| J8-UVF | BN-28 26 | 2165 | ex J6-UVF |
| NORWEGIAN AIR SHUTTLE [DY/NAX 'NOR SHUTTLE'] | | | |
| LN-DYZ | B737-8JP | 39013 | dd 21.05.12, tail logo 'Aril Edvardsen - Norwegian evangelist' |
| WIDERØE'S FLYVESELSKAP [WF/WIF] | | | |
| LN-WSC | Dash 8-202 | 441 | ex C-GLUG, dd 01.06.12 after mods in Canada |
| CARGOLUX [CV/CLX] | | | |
| LX-CVV | B747-8R7F | 35607 | named 'City of Ettelbruck' |
| LX-VCF | B747-8R7F | 35610 | dd 24.05.12, named 'City of Echternach' |
| DOT - DANU ORO TRANSPORTAS [R6/DNU] | | | |
| LY-MCA | ATR 72-201 | 212 | ret fr Antrak Air |
| AIR VIA [VL/VIM 'VIA AIRWAYS'] | | | |
| LZ-MDR | A320-232 | 5158 | ex D-AXAC, dd 23.05.12, lsd fr AWAS |
| BULGARIAN AIR CHARTER [BUC 'BULGARIAN CHARTER'] | | | |
| LZ-LDM | MD-82 | 53228 | ex EK8228, ret fr Ararat Int'l |

Still carrying its ANA Wings colours, Bombardier Dash 8-Q314, OY-CJY (c/n 592), belonging to Nordic Aviation capital, was pictured at Eindhoven Holland in June where it had arrived for repainting. It has since been operating for Widerøe of Norway. (Niels Quist)

While some of the Airbuses acquired by Iberia Express have kept their original serials, this A320-214 has been reregistered from EC-HTA to EC-LRG (c/n 1516). (Javier Rodriguez)





Airliner Deliveries

South African low cost carrier Kulula (Comair Limited) has taken delivery of its first brand new Boeing 737-8LD in the form of ZS-ZWA (c/n 40851). The aircraft wears a new corporate livery/colourscheme.

(Joe G Walker)



Russian carrier Orenair (Orenburg Airlines) has received its second Boeing 777-2Q8(ER). The aircraft, F-OMAY (c/n 29402), was repainted with KLM at Amsterdam before repositioning back to Paris/Charles de Gaulle for pre-delivery work and delivery as VP-BHB on July 9. (Ton Jochems)

| ABX AIR [GB/ABX 'ABEX'] | | | |
|-------------------------|---------------|-------|---|
| N220CY | B767-383ER(F) | 24729 | ex EC-LKV, dd 04.05.12, lsd fr GAP |
| N709AX | B767-231 | 22572 | cnvrt'd to B767-231(F) by IAI Bedek, dd ex-Tel Aviv 14.05.12, rr N653GT ferried to Tel Aviv 02-04.05.12 for conversion to freighter |
| N713AX | B767-205 | 23058 | |

| AIR FLAMENCO [R9] | | | |
|-----------------------------------|----------|-------|---------------------------|
| N203PR | BN-28 26 | 2248 | ex G-BSWU, reg'd 11.05.12 |
| AIRTRAN AIRWAYS [FL/TRS 'CITRUS'] | | | |
| N167AT | B737-7BD | 33918 | rr N7704B |

| ALASKA AIRLINES [AS/ASA] | | | |
|--------------------------|----------|-------|---|
| N538AS | B737-890 | 41188 | dd 22.05.12, st Wells Fargo Bank Northwest & lsd back |
| N617AS | B737-790 | 30542 | st Wells Fargo Bank Northwest & lsd back |
| N623AS | B737-790 | 30166 | Northwest & lsd back as N623AS |
| N624AS | B737-790 | 30778 | |

| ALLEGIAN AIR [G4/AAV] | | | |
|-----------------------|-------|-------|------------------------|
| N426NV | MD-82 | 49438 | cnvrt'd to MD-83 05.12 |

| AMERICAN AIRLINES [AA/AAL] | | | |
|----------------------------|----------|-------|--|
| N891NN | B737-823 | 33315 | ex N1786B, dd 08.05.12, st Wilmington Trust & lsd back |
| N892NN | B737-823 | 31145 | dd 22.05.12, st Wells Fargo Bank Northwest & lsd back |

| | | | |
|--------|-------|-------|---|
| N921TW | MD-82 | 49101 | dd 29.05.12, is in full Panalpina colours |
| N922TW | MD-82 | 48013 | |

| ATLAS AIR [SY/GTI] | | | |
|--------------------|-------------|-------|---|
| N707AX | B767-231(F) | 22570 | dd 15.05.12, lsd fr/op for DHL, rr N651GT |
| N850GT | B747-87UF | 37570 | is in full Panalpina colours |

| BERRY AVIATION [BYA] | | | |
|----------------------|------------|--------|-----------------------------------|
| N707TG | Emb. 120ER | 120182 | ex N17728, bf Gordon Air 03.05.12 |

| DELTA AIR LINES [DL/DAL] | | | |
|--------------------------|----------|-------|--|
| N674US | B747-451 | 30269 | ferried Marana - Singapore 20-22.05.12 for maintenance & rts after storage |
| N940DN | MD-90-30 | 53359 | ex JA8004 |

| | | | |
|--------|----------|-------|--|
| N960DN | MD-90-30 | 53530 | ferried Marana - Atlanta 16.05.12 for repaint into Delta colours, ferried to Cecil Field for maintenance |
| N963DN | MD-90-30 | 53533 | ferried Atlanta - Cecil Field 16.02.12, back to Atlanta 03.05.12, now in service |

| | | | |
|--------|----------|-------|--|
| N964DN | MD-90-30 | 60001 | ferried Marana - Atlanta 03.05.12 for painting |
| N965DN | MD-90-30 | 60002 | ferried Marana - Atlanta for painting, to Miami 23.05.12 for maintenance |

| EP AVIATION | | | |
|------------------------------|------------|-------|--|
| N604AR | S-61N | 61222 | ex C-GBSF |
| ERA AVIATION [7H/ERR 'ERAH'] | | | |
| N215AL | Dash 8-103 | 215 | ex RA-67251, dd 17.05.12, lsd fr Avmax |

| ERA HELICOPTERS | | | |
|---|-------------|-------|--|
| N602JS | EC-225LP | 2821 | ex F-HUMB, reg'd 07.05.12 |
| EVERGREEN INTERNATIONAL AIRLINES [EZ/EIA] | | | |
| N741WA | B747-4H6(F) | 25702 | dd 24.05.12, lsd fr Aircastle, rr N493EV |

| EVERTS AIR [3Z/VTS] | | | |
|---------------------|----------|-------|-----------|
| N930AX | DC-9-33F | 47363 | rr N930CE |
| N935AX | DC-9-33F | 47413 | rr N935CE |

| FEDEX EXPRESS [FM/FDX 'EXPRESS'] | | | |
|----------------------------------|----------|-------|--|
| N952FD | B757-236 | 28666 | cnvrt'd to B757-236(F) by SASCO, dd ex-Singapore ferried Victorville - Singapore 18.05.12 for cargo conversion |
| N954FD | B757-236 | 29113 | cnvrt'd to B757-21B(F) by SASCO, dd ex-Singapore 27.04.12 |

| | | | |
|--------|-----------|-------|---------------------------------------|
| N957FD | B757-21B | 24774 | dd 15.05.12, purch off lease 22.05.12 |
| N864FD | B777-FS2 | 37735 | |
| N131FE | DC-10-30F | 48311 | |

| FRONTIER AIRLINES [F9/FFT] | | | |
|----------------------------|----------|------|--------------------------------------|
| N263AV | A320-214 | 1860 | ex D-AXLB, dd 29.05.12, lsd fr GECAS |



| GOJET AIRLINES [G7/GJS 'LINDBERGH'] | | | |
|-------------------------------------|--------|-------|--------------------------------------|
| N317CA | CRJ700 | 10055 | ex C-GIAW, dd 09.05.12, lsd fr Delta |
| N331CA | CRJ700 | 10061 | ex C-GIBK, dd 09.05.12, lsd fr Delta |

| HAWAIIAN AIRLINES [HA/HAL] | | | |
|----------------------------|----------|------|--|
| N386HA | A330-243 | 1302 | named 'Heiheionakelki' |
| N388HA | A330-243 | 1310 | ex F-WWKN, dd 11.05.12, st Wilmington Trust & lsd back, named 'Nahiku' |

| HORIZON AIR [QX/QXE] | | | |
|----------------------|-------------|------|---|
| N414QX | Dash 8-Q402 | 4061 | repainted into San Diego State University colours |
| N449QX | Dash 8-Q402 | 4410 | ex C-GNGZ, dd 04.06.12 |

| JETBLUE AIRWAYS [B6/JBU] | | | |
|--------------------------|----------------|------|------------------------|
| N351JB | E190-100AR0549 | | ex PT-TBP, dd 25.06.12 |
| N804JB | A320-232 | 5142 | ex F-WWBE, dd 16.05.12 |

| NORTHERN AIR CARGO [NC/NAC 'YUKON'] | | | |
|-------------------------------------|-------------|-------|--------------------------------------|
| N361NC | B737-301(F) | 23260 | ex TF-BBI, dd 18.06.12, lsd fr GECAS |

| PENAIR [KS/PEN 'PENINSULAR'] | | | |
|------------------------------|-----------|-----|--|
| N406XJ | Saab 340B | 406 | ex SE-B06, dd 15.05.12, lsd fr Lambert Leasing |
| N410XJ | Saab 340B | 410 | ex SE-B10, dd 21.05.12, lsd fr Lambert Leasing |

| SILVER AIRWAYS [3M/SIL 'SILVER WINGS'] | | | |
|--|-----------|-----|---|
| N433XJ | Saab 340B | 433 | ex SE-B33, dd 17.05.12, bf Lambert Leasing, to be rr N353AG |
| N445XJ | Saab 340B | 445 | rr N351AG |

| | | | |
|--------|-----------|-----|---|
| N446XJ | Saab 340B | 446 | ex SE-B46, dd 14.05.12, bf Lambert Leasing, to be rr N346AG |
| N448XJ | Saab 340B | 448 | ex SE-B48, dd 25.05.12, bf Lambert Leasing, to be rr N348AG |

| SKYWEST AIRLINES [00/SKW] | | | |
|---------------------------|--------|-------|-------------------------------|
| N708SK | CRJ700 | 10156 | in new United Express colours |
| N936SW | CRJ200 | 7726 | in new United Express colours |
| N937SW | CRJ200 | 7735 | as N936SW |
| N941SW | CRJ200 | 7750 | as N936SW |
| N952SW | CRJ200 | 7805 | as N936SW |
| N962SW | CRJ200 | 7859 | as N936SW |

| SOUTHWEST AIRLINES [WN/SWA] | | | |
|-----------------------------|----------|-------|--|
| N7726A | B737-7BD | 33924 | ex N288AT |
| N7730A | B737-7BD | 33926 | ex N292AT |
| N8307K | B737-8H4 | 36987 | dd 07.05.12 |
| N8308K | B737-8H4 | 36682 | dd 15.05.12 |
| N8309K | B737-8H4 | 36985 | dd 18.05.12 |
| N8601C | B737-8H4 | 38874 | dd 24.05.12, lsd fr ACG, placed in trust with Bank of Utah |

| SPIRIT AIRLINES [NK/NKS 'SPIRIT WING'] | | | |
|--|----------|------|---|
| N614NK | A320-232 | 5132 | ex F-WWDF, dd 23.05.12, st NAS Investments 7 & lsd back |
| N615NK | A320-232 | 5159 | ex F-WWDS, dd 29.05.12, st Avalon & lsd back |

| UNITED AIR LINES [UA/UAL] | | | |
|---------------------------|-----------------|--|-------------|
| N68452 | B737-924ER40005 | | dd 10.05.12 |
| N68453 | B737-924ER41472 | | dd 30.05.12 |

| UNITED PARCEL SERVICE [SX/UPS] | | | |
|--------------------------------|-----------|-------|--|
| N352UP | B767-34AF | 37875 | dd 22.05.12, st C.C. & E.I. LLC & lsd back |

| VIRGIN AMERICA [VX/VRO 'REDWOOD'] | | | |
|-----------------------------------|----------|------|---------------------------|
| N527VA | A319-112 | 3417 | cnvrt'd to A319-115 05.21 |
| N851VA | A320-214 | 4999 | 'Friends Of Arjay Miller' |

| N853VA | A320-214 | 5034 | named 'mt hoodie' |
|----------------------------------|----------|-------|--|
| WORLD ATLANTIC AIRLINES [ZQ/WAL] | | | |
| N563AA | MD-83 | 49345 | dd 04.12, lsd fr Jetran, to be rr N804WA |

| WRIGHT AIR SERVICE | | | |
|-------------------------------|----------|------|--------------------------------------|
| N999WV | Ce 208B | 2082 | |
| MIDDLE EAST AIRLINES [ME/MEA] | | | |
| F-OMRA | A320-214 | 5162 | ex D-AXAD, dd 24.05.12, lsd fr GECAS |

| NIKI [HG/NLY 'FLYNIKI'] | | | |
|-------------------------|----------|------|--|
| D-ABDG | A320-214 | 3121 | ex F-WWBD, dd 29.04.12, lsd fr Air Berlin |
| D-ABFU | A320-214 | 4743 | ex D-AVJ, dd 25.04.12, wet-lsd fr Air Berlin |

| HOLIDAY CZECH AIRLINES [HCC 'CZECH HOLIDAYS'] | | | |
|---|----------|------|---|
| OK-LEE | A320-214 | 2719 | ex F-WWDC, has additional Iceland Express titles & logo |
| OK-LEF | A320-214 | 2758 | ex F-WWDP |

| SMART WINGS [SP/TVS 'TRAVEL SERVICE'] | | | |
|---------------------------------------|----------|-------|-------------------------------------|
| OK-SWW | B737-7Q8 | 28254 | ex El-EUU, dd 03.06.12, lsd fr ILFC |

| TRAVEL SERVICE AIRLINES [QS/TVS 'SKYTRAVEL'] | | | |
|--|----------|-------|---------------------------|
| OK-TVF | B737-8FH | 29669 | ex C-GTVF, ret fr Sunwing |
| OK-TVG | B737-8Q8 | 30719 | ex C-GTVG, ret fr Sunwing |

| | | | |
|--------|----------|-------|--|
| OK-TVV | B737-86N | 38027 | ex N1787B, dd 09.05.12, lsd fr GECAS |
| YL-LCC | A320-211 | 0310 | ex C-FKPS, dd 24.05.12, sub-lsd fr SmartLynx |

| TNT AIRWAYS [3V/TAY 'QUALITY'] | | | |
|--------------------------------|----------|-------|--------------------------------------|
| OE-IAT | B737-4M0 | 29210 | ex PK-G20, dd 06.06.12, lsd fr GECAS |

| CIMBER A/S | | | |
|------------|--------|------|-----------|
| OY-RJG | CRJ100 | 7104 | ex D-ACLU |
| OY-RJH | CRJ100 | 7090 | ex D-ACLS |

| | | | |
|--------|--------|------|-----------|
| OY-RJI | CRJ100 | 7093 | ex D-ACLT |
| OY-RJJ | CRJ200 | 7784 | ex HA-LNC |

| JET TIME [JTG] | | | |
|----------------|----------|-------|---|
| OY-JTU | B737-7L9 | 28010 | ex OY-MRG, dd 12.06.12 |
| OY-JTW | B737-7L9 | 28008 | ex OY-MRE, dd 31.05.12, (both lsd fr Aircastle) |

| KLM CITYHOPPER [KL/KLC] | | | |
|----------------------------|------------------|-------|------------------------|
| PH-EZX | E190-100STD 0545 | | ex PT-TBI, dd 25.05.12 |
| TRANSVIA AIRLINES [HV/TRA] | | | |
| PH-HSG | B737-8K2 | 39262 | dd 01.05.12 |

| DUTCH ANTILLES EXPRESS [9H/DNL] | | | |
|---------------------------------|------------|-------|--------------------------------------|
| PJ-DAC | Fokker 100 | 11337 | ex PH-CXP, dd 09.05.12, lsd fr SAMCO |

| CARDIG AIR [8F/CAD] | | | |
|---------------------|-------------|-------|--------------------------------------|
| PK-BBY | B737-3Q8(F) | 23535 | ex El-ETW, dd 05.04.12, lsd fr GECAS |

| GARUDA CITILINK | | | |
|-----------------|----------|------|-----------------------------------|
| PK-GLG | A320-214 | 3861 | ex A9C-BAV, dd 05.12, lsd fr ILFC |

| GARUDA INDONESIA [GA/GIA] | | | |
|--|----------|-------|--|
| PK-GMW | B737-8U3 | 38089 | dd 07.05.12 |
| INDONESIA AIRASIA [QZ/AWQ 'WAGON AIR'] | | | |
| PK-AWX | A320-216 | 5137 | ex F-WWVD, dd 16.05.12, lsd fr AirAsia |

| LION AIR [JT/LNI 'LION INTER'] | | | |
|--------------------------------|------------------|-------|-------------|
| PK-LJS | B737-8GP | 37293 | dd 22.05.12 |
| PK-LJT | B737-9GPER 38720 | | dd 31.05.12 |

| MERPATI NUSANTARA AIRLINES [MZ/MNA] | | | |
|-------------------------------------|----------|-------|-------------------------------------|
| PK-MDR | B737-4Q8 | 26334 | ex B-2965, dd 18.05.12, lsd fr ILFC |

Key to Abbreviations

| | |
|---------|---|
| a/c | aircraft |
| als | airlines |
| awys | airways |
| bf | bought from |
| b/u | broken up/scrapped |
| canx | cancelled |
| cls | colours |
| cn | manufacturer's construction/serial number |
| cnvrt'd | converted |
| dbf | destroyed by fire |
| dbf | damaged beyond repair |
| dd | delivery date |
| ex | previous reg'n |
| ff | first flight |
| frtr | freighter |
| lrf | last revenue flight |
| lsd fr | leased from |
| lsd to | leased to |
| msn | see cn |
| ntu | not taken up |
| oo | on order |
| op | operated |
| pax | passenger |
| pwfu | permanently withdrawn from use |
| reg'd | registered |
| reg'n | registration |
| ret fr | returned from |
| ret to | re-registered |
| rrs | return to service |
| sb | sold by |
| scr | scrapped/broken up |
| st | sold to |
| std | stored |
| tba | to be advised |
| unk | unknown |
| wfu | withdrawn from use |
| w/o | written off/destroyed |

Thanks to Dave Richardson and LAASI Aviation for the above

We welcome any feedback on this listing.

(The listing is alphabetical with reference to the registration of the country of origin.)

| | | | |
|--|----------------|-------|---|
| SRIWIJAYA AIR [SJ/SJY] | | | |
| PK-CLC | B737-524 | 27323 | ex N27610, dd 14.05.12, named 'Citra' |
| TRANSNUSA AVIATION MANDIRI | | | |
| PK-TND | Fokker 50 | 20260 | ex OB-1829 |
| TRI-M.G. [GY/TMG] | | | |
| PK-YGG | B737-301(F) | 23743 | ex N433RC, dd 23.04.12, lsd fr RPK Capital |
| WINGS ABADI AIRLINES [IW/WON] | | | |
| PK-WFW | ATR 72-212A | 1024 | ex F-WWEK, dd 23.05.12 |
| AZUL LINHAS AÉREAS BRASILEIRAS [AD/AZU] | | | |
| PR-ATK | ATR 72-600 | 1020 | ex F-WWLN, dd 12.05.12 |
| PR-AXF | E190-200AR0530 | | dd 24.04.12, named 'Azul Acima de Tudo' |
| PASSAREDO TRANSPORTES AÉREOS [P3/PTB] | | | |
| PR-PDA | ATR 72-600 | 1022 | ex F-WWLP, dd 22.05.12, lsd fr ALC |
| TRIP LINHAS AÉREAS [T4/TIB] | | | |
| PP-PJU | E190-100LR0541 | | dd 17.05.12 |
| PR-TTG | ATR 42-320 | 020 | rr PR-MPN |
| WEBJET LINHAS AÉREAS [WH/WEB] | | | |
| PR-GGD | B737-8EH | 34275 | ex N17868 |
| AIR NIUGINI [PX/ANG] | | | |
| P2-PXI | Dash 8-201 | 460 | ex C-GHQO, dd 10.05.12 |
| GLOBUS [GH/GLP] | | | |
| VP-BDF | B737-8Q8 | 30672 | ex EI-EWK, dd 24.05.12, sub-lsd fr S7 Airlines |
| ORENAIR – ORENBURG AIRLINES [R2/ORB 'ORENBURG'] | | | |
| VP-BEZ | B737-86J | 32625 | ex D-ABBC |
| VP-BFA | B737-804 | 28231 | ex SE-DZK, dd 21.05.12, lsd fr Aircastle |
| S7 AIRLINES [S7/SBI] | | | |
| VP-BDF | B737-8Q8 | 30672 | ex EI-EWK, dd 24.05.12, lsd fr ILFC, sub-lsd to Globus |
| VQ-BPN | A320-214 | 5167 | ex F-WWBV, dd 31.05.12, lsd fr ALC |
| VQ-BRG | A320-214 | 5134 | ex F-WWDA, dd 14.05.12, lsd fr ACG |
| TRANSAERO AIRLINES [UN/TSO] | | | |
| EI-RUE | B737-85P | 28388 | ex EC-HKQ, dd 27.05.12, lsd fr Alafco |
| EI-RUG | B737-86N | 28610 | ex VT-SJF, dd 16.05.12 |
| EI-XLE | B747-446 | 26362 | ferried Rome – Moscow |
| N747JV | B747-412 | 28029 | ex 9V-SPR, ferried Tokyo – Rome 19-20.05.12, to Melbourne 30.05.12, lsd fr VEHL-767-300 Ltd |
| N922UN | B747-446 | 27646 | rr EI-XLJ, ferried Melbourne – St Petersburg 12-13.05.12, lsd fr Richdale Investments |
| UTAIR AVIATION [UT/UTA 'TJUMAVI'] | | | |
| VP-BAS | B757-28A | 28161 | ex EI-ETS, dd 25.05.12, lsd fr ILFC |
| YAMAL AIRLINES [YC/LLM] | | | |
| VP-BBE | CRJ200 | 7630 | ex D-ACRG, dd 07.05.12 |
| VP-BBN | A320-232 | 1918 | ex EI-ELD, dd 14.06.12, lsd fr ACG |
| PHILIPPINE AIRLINES [PR/PAL] | | | |
| RP-C8618 | A320-214 | 5140 | ex D-AVVL, dd 10.05.12, lsd fr GECAS |
| ZEST AIRWAYS [ZZ/RIT 'ASIAN SPIRIT'] | | | |
| RP-C8996 | A320-233 | 0874 | ex N593SH, dd 16.05.12, lsd fr GECAS |
| MALMO AVIATION [TF/TWE] | | | |
| SE-DSO | Avro RJ85 | E2392 | ex OH-SAL, dd 24.05.12, sub-lsd fr Blue1 |

| | | | |
|---|-------------|-------|---|
| SAS SCANDINAVIAN AIRLINES [SK/SAS] | | | |
| SE-DHF | MD-83 | 49642 | ex EC-GVO, reg'd 21.05.12 |
| SE-RET | B737-76N | 32734 | ex N588SC, dd 23.05.12, lsd fr GECAS |
| SE-RJH | MD-82 | 53165 | ex EC-GCV, reg'd 21.05.12 |
| BINGO AIRWAYS [BGY 'SKIMMER'] | | | |
| SP-ABK | A320-233 | 2118 | ex TC-IZA, dd 05.05.12, lsd fr MCAP |
| EUROLOT [K2/ELO] | | | |
| SP-EQA | Dash 8-Q402 | 4406 | st NAC & lsd back |
| SP-EQB | Dash 8-Q402 | 4407 | ex C-GMXX, dd 28.05.12, st NAC & lsd back |
| SP-EQC | Dash 8-Q402 | 4408 | ex C-GMYD, dd 28.05.12, st NAC & lsd back |
| OLT EXPRESS POLAND [O2/JEA/YAP] | | | |
| SP-IAG | A320-214 | 2668 | ex OE-LEO, dd 09.05.12, lsd fr Niki |
| SP-IBA | A319-112 | 3865 | ex D-ABGS, dd 01.06.12 |
| SP-IBC | A319-111 | 2460 | ex G-EZIG, dd 11.05.12, lsd fr DAE |
| TRAVEL SERVICE POLAND [TPV] | | | |
| SP-TVZ | B737-88K | 29643 | ex OK-TVN, dd 22.04.12, sub-lsd fr Travel Service |
| ALMASRIA UNIVERSAL AIRLINES [UJ/LMU] | | | |
| SU-TCO | A321-231 | 1366 | ex EI-EUD, dd 29.05.12, lsd fr Caliope |
| PALESTINIAN AIRLINES [PF/PNW] | | | |
| SU-YAH | Fokker 50 | 20123 | ret fr Air Memphis |
| SU-YAI | Fokker 50 | 20143 | as SU-YAH |
| - Recommended operations 09.05.12 | | | |
| GAINJET AVIATION [GNJ] | | | |
| SK-VIP | B737-3Y0 | 24680 | ex N553MS, dd 18.05.12, lsd fr 24680 Holding Ltd |
| MINOAN AIR [MAV] | | | |
| SK-BRS | Fokker 50 | 20206 | ex PH-KVE, dd 27.05.12, named 'Stamitis' |
| ATLASJET INTERNATIONAL [KK/KKK] | | | |
| TC-ATK | A320-232 | 2747 | ex OE-IBD, dd 30.05.12, lsd fr AerCap |
| MYCARGO AIRLINES [9T/RUN] | | | |
| TC-ACG | B747-481(F) | 25641 | ex N597MS, dd 10.05.12 |
| ONUR AIR [8Q/OHY] | | | |
| TC-OBN | A320-232 | 2571 | ex LZ-WZA, dd 22.04.12, lsd fr ACG |
| TC-OBS | A320-232 | 0543 | ex EI-EEL, dd 18.05.12, lsd fr ILFC |
| TC-OBV | A321-231 | 0806 | ex TC-JMC, dd 05.12, lsd fr ILFC |
| PEGASUS AIRLINES [PC/PGT 'SUNTURK'] | | | |
| TC-CPE | B737-82R | 38178 | dd 03.05.12, named 'Bade' |
| TURKISH AIRLINES [TK/THY] | | | |
| TC-JAI | A320-232 | 3259 | ex N569MS, dd 09.06.12, lsd fr GECAS |
| TC-JBI | A320-232 | 3308 | ex N568MS, dd 28.05.12, lsd fr GECAS |
| TC-JHM | B737-8F2 | 40980 | dd 29.05.12, named 'Burgaz' |
| TC-JNR | A330-343E | 1311 | ex F-WWVY, dd 09.05.12, named 'Halic Golden Horn' |
| TC-JRU | A321-231 | 4788 | named 'Florya' |
| TC-JRY | A321-231 | 5083 | named 'Beyoglu' |
| TC-JSA | A321-231 | 5154 | ex D-AVZE, dd 15.05.12 |
| TC-JUA | A319-132 | 2404 | ex TC-IZM, dd 07.06.12, lsd fr ILFC |
| TC-JUB | A319-132 | 2414 | ex TC-IZR, dd 15.06.12, lsd fr ILFC |
| TC-JYC | B737-9F2ER | 40977 | ex N977TK, dd 24.05.12, named 'Eregu' |

| | | | |
|---|---------------|----------|--|
| WOW AIR | | | |
| LV-VEY | A320-212 | 0419 | dd 01.06.12, lsd fr Avion Express |
| BEK AIR | | | |
| UP-F1004 | Fokker 100 | 11445 | ex PK-RGE |
| AEROSVIT AIRLINES [VV/AEW] | | | |
| UR-AAO | B737-84R | 38120 | dd 24.05.12 |
| KHORS AIR [KO/KHO] | | | |
| UR-CKA | A320-231 | 0393 | ex EI-EEX, dd 25.05.12, lsd fr Aviatrans K |
| WIND ROSE AIR | | | |
| UR-CKB | A320-231 | 0414 | ex EI-EY, dd 12.06.12, lsd fr Aviatrans |
| AIRNORTH REGIONAL [REGIONALLINK] [TL/ANO 'TOPEND'] | | | |
| VH-ANV | ERJ-170-100LR | 0280 | named 'Makikit Timor' |
| BROOME AVIATION [FY] | | | |
| VH-TLH | Ce 208B | 0800 | ex 9M-PMA, reg'd 01.06.12, lsd fr Acena Nominees |
| COBHAM AVIATION/ NATIONAL JET SYSTEMS [NC/NJS] | | | |
| VH-NJI | Avro RJ100 | E3265 | ferried Adelaide – Perth 04.06.12 after storage |
| HARDY AVIATION | | | |
| VH-ANP | Ce 404 | 404-0010 | dd 17.05.12 |
| PAYS HELICOPTERS PTY LTD | | | |
| VH-MKC | Pa.31 | 350 | 05201 |
| SKYWEST AIRLINES [XR/OZW] | | | |
| VH-FVX | ATR 72-212A | 986 | ex OY-CJV, dd 18.05.12, lsd fr NAC, op in Virgin Australia colours |
| SLINGAIR | | | |
| VH-TUY | Ce 208B | 1200 | ex VH-TFW |
| VIRGIN AUSTRALIA [DJ/VOZ] | | | |
| VH-YFL | B737-8FE | 41002 | dd 25.05.12, named 'Sandy Beach', std Jackson Square & lsd back |
| DECCAN CHARTERS | | | |
| VT-DCD | Ce 208B | 2039 | ex D-FAAI, reg'd 11.06.12 |
| INDIGO [6E/IGO 'IFLY'] | | | |
| VT-IET | A320-232 | 5094 | st AWAS 05.12 & lsd back |
| VT-IEW | A320-232 | 5155 | ex D-AXAB, dd 25.05.12, st MSN 5155-1 Spring Ltd & lsd back |
| JET AIRWAYS [9W/JAI] | | | |
| VT-JBZ | B737-96NER | 36539 | ex M-ABER, dd 25.05.12, lsd fr GECAS |
| VT-JGP | B737-8SR | 34798 | st Avolon 06.12 & lsd back |
| SPIRITJET [SG/SEJ] | | | |
| VT-SGZ | B737-8GJ | 39423 | dd 09.05.12, lsd fr AWAS, named 'Caraway' |
| VT-SUH | Dash 8-Q402 | 4389 | ex C-GKVP, dd 12.05.12 |
| VT-SZA | B737-8GJ | 39424 | dd 30.05.12, lsd fr AWAS, named 'Sage' |
| AEROMEXICO CONNECT (AEROLITTORAL) [SD/SLI] | | | |
| XA-ACK | E190-100LR | 0538 | ex PT-TYW, dd 11.05.12, lsd fr Aeromexico |
| XA-ACM | E190-100LR | 0546 | dd 25.05.12, lsd fr Aeromexico |
| AERONAVES TSM [VTM] | | | |
| XA-UAL | SA227-AC | AC-704 | ex N704C |
| XA-UQT | DC-9 32 | 47147 | ex N905AX, dd 27.04.12 |
| INTERJET [40/AIJ 'ABC AEROLINEAS'] | | | |
| XA-PAL | A320-231 | 0169 | ex N196AG, bf ACG, dd Victorville – Toluca 01.05.12 in Travel Service cls, reported to be used as a ground instructional trainer |
| XA-VCT | A320-214 | 5163 | ex F-WWDI, dd 31.05.12 |
| TRANSPORTES AÉREOS TERRESTRES | | | |
| N471SC | DHC-6-300 | 300 | ex PZ-TBW, dd 24.05.12, lsd fr Gum Air |
| VIGO JET | | | |
| XA-TTX | SA227-AC | AC-484 | ex N341AE |
| CAMBODIA ANGKOR AIR [K6/KHV 'CAMBODIA AIR'] | | | |
| VN-A349 | A321-231 | 2480 | ex D-AVXC, dd 04.12, lsd fr Vietnam Airlines |
| SKYWINGS ASIA AIRLINES | | | |
| XU-ZAC | A320-231 | 0430 | ex N286AT, dd 23.04.12, lsd fr AeroTurbine |

One of a batch of four Bombardier Dash 8-Q400s for Indian operator SpiceJet that were delivered in late June/early July, VT-SUI (c/n 4395), made a refuelling stop at Malta. (Stephen J Muscat via Chris Cauchi)

One of two Cessna 208B Caravans that transited Malta in July bound for Africa. N20269 (c/n 2352) was on delivery to Air Kenya. (Stephen J Muscat via Chris Cauchi)



The latest training aids available for the aviation professional

Full-Motion Helicopter Simulator

Africa's first full-motion helicopter flight simulator has been commissioned by Eurocopter at Kempton Park near Johannesburg in South Africa. It is designed to train pilots and flight engineers operating the Super Puma and similarly compatible helicopters for both civilian and military uses.

CAE in Barcelona

Simulator maker CAE has inaugurated a new training centre in Barcelona, Spain, for commercial aircraft pilots and cabin-crew. It is located in Parque de Negocios Mas Blau II, near the main operations of Vueling Airlines, the primary customer of the new facility.

"Spain is a very important civil aviation market in Europe and we are pleased to add a new location to deliver training in the Catalan region for our customers,"

said Jeff Roberts, CAE's Group President, civil simulation products, training and services. "We have a long association with Vueling and we are pleased to expand our partnership near its main operations in Barcelona."

CAE is currently recruiting cabincrew candidates for Vueling Airlines and will offer more than 20 cabincrew training courses per year at the new facility with about 30 students per class.



Part-Sponsored Pilot Programme

Low-fare carrier Flybe has started a new part-sponsored Multi Pilot Licence (MPL) programme with pilot training organisation Stella Aviation Academy of the Netherlands. It is designed to produce First Officers qualified for the Bombardier Dash 8-Q400s in the UK and Europe.

It will provide up to eight selected pilots with a financial contribution towards the training costs, a tailor-made training course, mentorship throughout the course and a conditional offer of employment as a first officer on Flybe's Q400 fleet in 2014. (Photo Flybe)

Successful Selection Day

Atlantic Flight Training (AFT) hosted an assessment day at London/Heathrow on July 12 for would-be pilots to come and find out whether they have what it takes to become a commercial airline pilot. It was deemed a great success by Director of Flight Crew Selection, Captain Mark

Robertson: "We are always thrilled at the high calibre of candidates that attend our assessment days; it is inspiring to see the enthusiasm and aptitude that these young people have. This event in particular demonstrated the benefits of our application process. Applicants that

had taken the time to seek advice and guidance from our Flight Crew Selection Officers and had utilised our pre-selection preparation material were head and shoulders above those who, on this occasion, didn't reach the Atlantic Flight Training standard."



Virtual Fly in South America

Flying training provider Virtual Fly has placed one of its OVO 04 units at the Los Halcones Flying School in Colombia, which trains around 400 students every year.

The OVO 04 simulator has a full-motion enclosed cabin, equipped with a 'glass' cockpit that can be used as a basic trainer and also to give experienced students further opportunity to practise flying with instruments using digital navigation screens. It is equipped with two web cameras inside the cabin that focus on the front and the control panel, both of which are monitored from the instructor's console. (Photo Virtual Flight)

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Information
for the
traveller.

Very Busy Manchester

The Aviation and Transport Fair, held in and around the Concorde Exhibition at the Visitors' Centre at Manchester Airport, UK, on July 14/15 goes from strength to strength. It now covers the whole spectrum of transport including aircraft, trains, cars and other vehicles, such as lorries and buses. There were also a number of military aircraft cockpits on display. Blessed with good weather, the sun attracted the visitors and car parks quickly filled up. Organised by a team from The Aviation Society (TAS), the event was a huge success and they are all to be congratulated for the hard work put in over the weekend. There were even brass bands to entertain the crowds. (Photo Airliner World)



Preserved Friendship



Fokker F-27-500 Friendship, PH-NIV (c/n 10449), has been moved from a temporary parking spot to a new prominent location just outside the gate at the Fokker Logistics Park at Oude Meer, Schiphol East, Holland. It was recently painted by the KLM maintenance group in vintage KLM colours and will serve as a gate guard paying tribute to the Fokker Aircraft work-

ers. Almost all of the former buildings are now gone and a new industrial park has been built – Fokker Logistical Park – at the same location. It currently plays host to DHL, Kerry Logistics, KLM and many others in the world of international logistics. The F-27 will eventually be displayed in the middle of the small lake next to the entrance gate. (Photo Michael Prophet)

Olympic Flame in Guernsey

As part of the UK tour of the Olympic flame, British Airways' Airbus A319-131, G-EUPC (c/n 1118), was an unusual visitor to Guernsey and Jersey on July 15. It is believed to be the first British Airways' aircraft to visit Guernsey since the days of scheduled Viscount services of predecessor airline BEA and then BA – except for services by BA Cityflyer Express. It is also the first A319 to visit Guernsey – boarding steps had to be delivered by boat to the island because the airport doesn't have any for this size of aircraft, and BA examples do not have internal airstairs. (Geoff Jones)

Rare BBJ



Only a very few pictures of this smart-looking Boeing 737-7JFBBJ, P4-LIG (c/n 37592), exist on the Internet despite the fact it has been flying since 2009. Its main base is Ostrava and it is owned by a company called Orex/Petroff Air. (Paul Denton)



Events

Organisers of enthusiasts' shows and events worldwide are invited to submit relevant details for inclusion in this listing, free of charge - address correspondence to the editorial department or visit our website at www.airlinerworld.com

Sep 9

Berlin Aviation Enthusiasts Convention, Training and Conference Centre Berlin/Schönefeld Airport, Berlin, Germany. Lutz Schönfeld, Tel: +49 (0)306765577
LS@aviation-and-media.de
www.aviation-and-media.de

Oct 6

Vancouver Airline and Aviation Collectibles Show, Oakridge Centre Mall Auditorium, Vancouver, Canada.
www.VancouverAviationShow.com

Oct 6

26th Annual Airline and Collectibles Show, Delta Air Transport and Heritage Museum, Atlanta, Georgia, USA. Greg Romanoski Tel: (001) 404 715 7886.
greg.romanoski@delta.com

Oct 20

Luton Aircraft and Transport Enthusiasts' Fair, Vauxhall Recreation Club, Gipsy Lane, Luton, Beds LU13JH, UK. Keith Manning Tel: +44 (0)1372 725063 (Eves)
londoner657@blueyonder.co.uk
www.aircraftenthusiastfair.co.uk

Nov 11

Heathrow Aircraft Enthusiasts' Fair, Kempton Park Racecourse, Sunbury on Thames, Middlesex, TW16 5AQ, UK. Keith Manning Tel: +44 (0)1372 725063 (Eves)
londoner657@blueyonder.co.uk
www.aircraftenthusiastfair.co.uk

Nov 25

Aircraft Enthusiasts Fair and Model Show, Museum of Army Flying, Middle Wallop, Hampshire, UK. Mark Roberts Tel +44 (0) 1264 334779.
mark@roberts15863.fsnet.co.uk

2013

Apr 28

LGW2013, the 24th Gatwick International Aircraft Enthusiasts Fair, K2 Pease Pottage Hill, Crawley, West Sussex, UK. Tel: Tom Singfield Tel: +44 (0) 1403252628
LGW2012@gatwickaviationsociety.org.uk
www.gatwickaviationsociety.org.uk

Shows/Displays

Sep 11-16

ILA Berlin 2012, Berlin/Brandenburg Airport, Germany.
www.ila-berlin.de

Sep 19-21

ERAA, Dublin, Ireland. www.eraa.org

Sep 30-Oct 3

World Routes 2012, Abu Dhabi. www.routesonline.com

Oct 30-Nov 1

NBAA, Orlando, Florida, USA. www.nbaa.org

Nov 13-18

Airshow Zhuhai, China. www.airshow.com.cn

Dec 11-13

MEBA, Dubai. www.meba.aero

2013

Apr 9-11

Aircraft Interiors Expo, Hamburg, Germany.
www.aircraftinteriorsexpo.com

Events are subject to change without Airliner World's knowledge. Please check details prior to travel.

The Future of Flight

The 'Make it in Great Britain Exhibition', which was officially opened on July 24 at the Science Museum in London, is intended to celebrate the success of British manufacturing. It will run throughout the period of both summer Olympics and as part of it, visitors can see how British

factories are contributing to the creation of Airbus aircraft. There's also a section on the future of flight which incorporates the Airbus Concept Plane - an engineer's dream of what aircraft may look like in 2050. The exhibition is free to enter. (Photo Airbus)

Information
for the
traveller.



Dreamliner Simulator at Farnborough

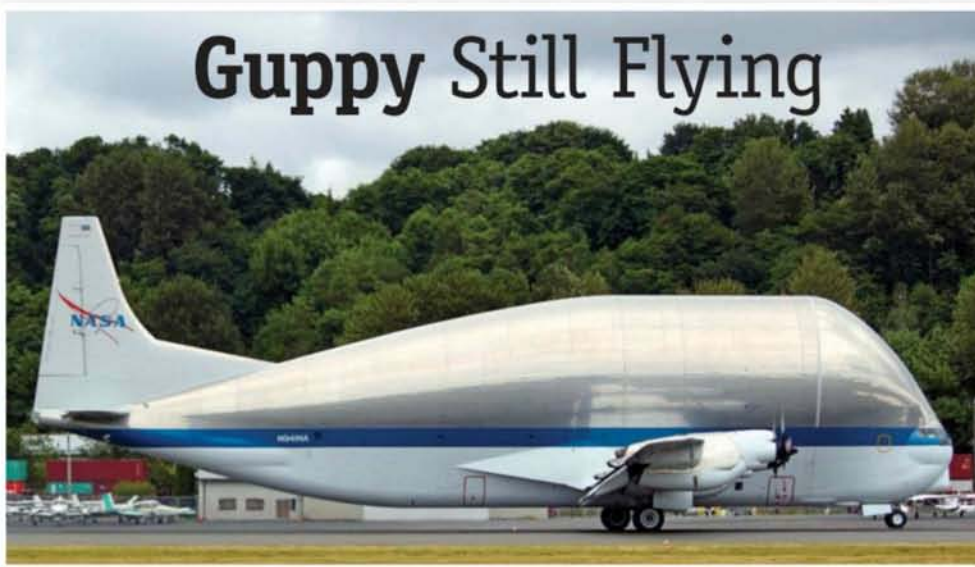
British Airways' newly upgraded Boeing 787 mobile simulator was at the Farnborough Airshow on July 14 and 15 so that the public could test their flying skills - for a small fee. Proceeds go to 'High Flight', a charity that helps disadvantaged and seriously ill children by enabling them to fly in light aircraft.

In its 26 years, the simulator has modelled a number of types and has been manned by volunteer British Airways pilots, clocking-up more than 25,000 miles visiting airshows, schools, and corporate and

charity events around the UK - the same as flying from London to Paris and back nearly 60 times.

Realistic cockpit controls, impressive visuals and even engine sounds combine to bring this unique experience to life. Upon completion of their virtual flight on the new Boeing 787, customers receive an overall score for their performance, a printed certificate and hopefully a round of applause from friends watching their flight on the simulator's external plasma screen.

Guppy Still Flying



On Saturday, June 30, the Museum of Flight, took delivery of the crew section of the Space Shuttle Full Fuselage Trainer (FFT) from NASA. Having received some of the smaller portions by road, from Houston, the main part was flown into Boeing Field, Seattle, Washington via NASA's Aero Spacelines 337SGT (Super Guppy Turbine), N941NA (c/n 004). The flight, 'NASA941', departed Ellington Field in Houston on June 27, and made stops en route at Dyess, Davis-Monthan, March, and Travis, before arriving at Boeing Field. (Joe G Walker)



**Information
for the
traveller.**

DC-3 Sculpture

The new Terminal 3 at Las Vegas/McCarran International Airport features a remarkable work of art made from small butterfly sculptures cleverly suspended on fine wires to represent the unmistakable shapes of two Douglas DC-3s. Massachusetts-based artist Stu Schechter describes his work as a "3D pointillism, indicating aircraft made out of butterflies." From a distance, viewers see two vintage DC-3s, but up close, they see 3,000 butterflies with lead-free pewter bodies and fluttering polymer wings that form the shapes. A closer look shows that they have airline logos on their wings. (Tom Singfield)



Manchester Tower

"Your photo of Manchester's Air Traffic Control Tower in the 1960s from the August issue brings back memories of a close encounter I had with it. I was a General Apprentice for British European Airways [BEA] at Heathrow in 1960, and was flying home to Manchester for the weekend. Instead of taking the usual Vickers Viscount, I got permission to fly on the Dan-Air York, which operated Heathrow-Manchester-Glasgow-Heathrow every week night. I sat in the navigator's seat, under the astrodome, and soon we were heading off, four Merlins roaring, down Runway 28 Right. What a feeling for a 20-year-old.

"All went well until approaching Ringway, when ATC recommended a left-hand circuit due to strong crosswinds. The captain

insisted on a right-hand circuit to save time, and so as we turned finals, we were blown well off the runway heading. An overshoot was carried out, and as I looked ahead, directly in front of us, and approaching rapidly, was the as yet un-opened ATC facility. I reckon we cleared it by no more than 50 feet! After a left-hand circuit, we landed normally, but the captain was instructed to call the tower supervisor by telephone. I later worked at Manchester for five years, then Heathrow as an aircraft dispatcher, followed by three years at BEA's head office, being responsible for the introduction of the Merchantman Freighter, and the Hawker Siddeley Trident 3. Finally, came 21 wonderful years running the ramp at Hong Kong/Kai Tak. Keep up the good work with *Airliner World!*" (Phil Walker, Portugal)

KidZania



The fuselage of this Douglas DC-9-31, N8923E (c/n 45838) is the centrepiece of the KidZania theme park in Santiago, Chile. It now wears the markings of LAN, one of the partners of the project. (Álvaro Romero)

Argosy in Iowa

Located in a remote corner of Sioux Gateway Airport in Iowa is the Mid America Transportation & Aviation Museum, which opened in July 2010. One of the aircraft outside is this ex-Royal Air

Force Armstrong Whitworth Argosy E1, XR143 (c/n 6798). It still retains its military markings, though some have faded through exposure to the weather. (Joe G Walker)



Final Call.....

Oxygen in Toilets

FEDERAL AVIATION officials in the US have ordered airlines to put emergency oxygen systems back in aircraft toilets. This reverses a decision made last year to remove them because of fears that terrorists could use them to start a fire during flight. The FAA said that restoring the systems over the next three years will "eliminate a potential hazard that could jeopardise flight safety." The new equipment is supposed to be harder to tamper with, although officials haven't yet approved any designs. The rule covers about 5,500 aircraft and is expected to cost airlines \$44.2 million.

Power loss led to crash

The Nigerian Accident Investigation Bureau has published its preliminary report into June's accident involving a Dana Air McDonnell Douglas MD-83. The aircraft was completing a scheduled flight from Abuja to Lagos when, according to the report, it "suffered a total loss of power in both engines," and crashed in a residential area to the north of Murtala Muhammed Airport, with the loss of all 153 passengers and crew together with another ten people on the ground.

The report continued by saying that further "investigative activities will include, but not be limited to, the detailed examination of the engines, further testing of fuel samples, continued factual gathering of relevant historical, operational, maintenance and performance information of the accident aircraft in addition to other similar aircraft models, further investigation into the background of the flight crew, further analysis of the Cockpit Voice Recorder audio recording and review of pertinent issues associated with regulatory oversight". The report confirmed that the aircraft had enough fuel on board and that analysis of fuel samples taken from the refuelling vehicle and the main supply at Abuja did not reveal any trace of contamination.

ACAS and GPWS Mandates

Russia's Ministry of Transport has issued a mandate for the installation of Airborne Collision Avoidance Systems (ACAS) and Ground Proximity Warning Systems (GPWS) in the Russian commercial air fleet from July 1, 2012. Three years ago, the country's Federal Aviation Regulations (FAR-128) were adopted, paving the way for such installations and these were supposed to come into effect from January 1, 2012. However, Russian airlines asked for more time for their installation.

The Federal Air Transport Agency reports that there are 1,411 Russian-built aircraft (533 aircraft and 878 helicopters) with a certificate of airworthiness. Of these, 1,104 aircraft do not require ACAS equipment according to the requirements and provisions of FAR-128.

Of the 307 domestically-produced aircraft required to have ACAS, 283 aircraft are now so equipped, while 401 – out of 533 – that need a GPWS now have the equipment fitted.

Belly Landing a Boeing 737

The Baltic Aviation Academy (BAA) has released a video 'Boeing 737: Gear-Up Landing' in which one of the Academy's Air Transport Pilot's Licence (ATPL) students demonstrates how to conduct a precise landing without any undercarriage. (The video is accessible via <http://youtube.com/marketingbaa>. It is part of BAA's video tutorials familiarising avia-

tion enthusiasts with various situations on Full Flight Simulators. According to statistics, belly landings are normally not fatal unless executed carelessly. In response to demand from aviation enthusiasts and pilots for more information, BAA is producing videos on various aviation topics, interviews, webinars (web-based seminar) etc. (Photo BAA)



| DATE | REG'N | C/N | TYPE | OWNER | FATALITIES | LOCATION | NOTES |
|--------|----------|------------|----------------------|--------------------------|------------|-------------|---|
| Jun 22 | N508GT | LJ-1790 | B90GT King Air | OZ Gas Aviation | 1 | USA | Crashed after hitting aerial |
| Jun 24 | EJC-1131 | 1199 | Ce208B | Colombian Army | 4 | Colombia | Crashed en route |
| Jun 27 | RA-76761 | 0073479401 | IL-76MD | Russian Air Force | - | Russia | Severely damaged after heavy landing on nosewheel area |
| Jun 29 | B-3171 | 0379 | E190-100LR | Tianjin Airlines | 2 | China | Two alleged hijackers killed during foiled hijack attempt |
| Jun 29 | n/k | n/k | MH-53 | USN | - | South Korea | Burnt out in crash landing |
| Jul 1 | 93-1458 | 5363 | C-130H Hercules | USAF | 4 | USA | Crashed on fire-fighting mission |
| Jul 2 | EC-KSJ | 36467 | Bell 412EP | ENAR | 1 | Spain | Crashed on fire-fighting mission |
| Jul 2 | EC-JUN | 370804 | PZL W-3AM | BRIF | - | Spain | Crashed on fire-fighting mission |
| Jul 4 | AE-175 | 380-13 | Rockwell Sabreliner | Argentinean Army | - | Argentina | Left mainwheel collapsed on landing |
| Jul 4 | RA-25434 | 95575 | Mil Mi-8TV | PANH | 1 | Afghanistan | Crashed on landing |
| Jul 7 | N987GM | LW-65 | B90 King Air | Flagstaff Medical Center | 1 | USA | Broke up in severe weather |
| Jul 9 | BQ-TMT | 454 | DHC-6-300 Twin Otter | Trans Maldivian Airways | - | Maldives | Partially sank after float holed |
| Jul 10 | G-BZGK | 338-17 | OV-10B Bronco | Bronco Demo Team | - | UK | Crash-landed on airfield |
| Jul 12 | ST-MA? | n/k | Yunshuji Y-12 | Mauritanian Air Force | 7 | Mauritania | Crashed soon after take-off |
| Jul 12 | PT-MAB | 007 | Emb.121 | Banjet Taxi Aéreo | 3 | Brazil | Hit the sea whilst on approach |
| Jul 13 | N823GA | 1005 | Gulfstream IV | Universal Jet | 3 | France | Overshot runway on landing |
| Jul 14 | SN-MJI | 28640 | B737-76N | Arik Air | - | Nigeria | Struck wing of C-130 while taxiing |
| Jul 14 | NAF 917 | 4963 | C-130H | Nigerian Air Force | - | Nigeria | Struck by B737 (see above) |
| Jul 16 | n/k | n/k | Mil Mi-17 | Sudan Air Force | 7 | Sudan | Shot down by rebels |
| Jul 17 | N865AS | 7507 | CRJ200 | SkyWest | 1 | USA | Illegally taken by pilot at night. Crashed while taxiing |
| Jul 18 | CC-CRQ | 22135 | B737-230 | Sky | - | Chile | Wing damage on landing |
| Jul 19 | n/k | n/k | MH-53E | US Marines | 2 | Oman | Crashed |
| Jul 20 | n/k | n/k | Bell 212 | Brunei Air Force | 12 | Brunei | Crashed into jungle |
| Jul 20 | n/k | n/k | CH-47 Chinook | RAF | - | Wales | Crash landed after hitting power lines |
| Jul 22 | RF-00138 | 871908 | Let 410 | Russian Air Force | - | Russia | Damaged in hard landing |
| Jul 22 | n/k | n/k | S-70 | Turkish Army | 5 | Turkey | Crashed after loss of power |
| Jul 22 | N500VA | BB-1941 | B200 King Air | Weatherbell Aviation | - | USA | Damaged after belly landing |
| Jul 23 | RA-22936 | 99357688 | Mil Mi-8 | Tomsk Avia | - | Russia | Rolled over on landing |
| Jul 25 | n/k | n/k | AS532 Super Puma | Eurocopter | 4 | France | Crashed in a valley on a test flight |

Heathrow Trident Collection

The HS121 Trident Three, G-AWZK – when there was space for it at Heathrow Airport. (Airliner World)

Right • The collection includes an extensive reference library as well as an array of models, actual aircraft parts and other memorabilia. (Author)

Many of the collection's artefacts have an historic significance such as parts from the prototype Trident 1, G-ARPA (c/n 2101) which was scrapped in April 1976 at Prestwick in Scotland. (Author)

London's Heathrow Airport is a place steeped in history. However, it seems that – under the name of progress – all of the older buildings which were constructed during the facility's early years of the late 1940s and early 1950s are gradually being flattened and replaced by modern structures. Last year, the famous Queen's Building was demolished and now it is the turn of Heathrow's original and iconic Air Traffic Control Tower.

Along with the demise of so many recognisable features, the airport has seen other significant departures too. The Concorde model that once graced the entrance to the access tunnel for the central area is no longer there, it has been replaced by an Emirates Airline Airbus A380 – and one of Heathrow's most loved residents, Hawker Siddeley HS 121 Trident Three, G-AWZK (c/n 2312), was 'booted off' its home turf owing to the pace of redevelopment at the facility. The aircraft was eventually moved to the Aviation Viewing Park at Manchester Airport where it continues to be looked after today. The owner of Heathrow, BAA, it would seem (unfortunately) has little room for sentiment.



Thankfully, enthusiast Kevin Bowen has stepped forward to help secure some of the area's aviation heritage by establishing The Heathrow Trident Collection. Located in Feltham –

approximately 3 miles (5km) from the airport itself – the collection, which first opened its doors in 2008, provides a nostalgic insight into the history of British European Airways (BEA) and British Airways (BA) through the 1960s, '70s and '80s. However, the main focus concerns the development and operations of the Trident. The type's history and career with BEA/BA is told through memorabilia, photographs, models and actual aircraft parts. Key items include a functioning flightdeck centre console and systems station, as well as a complete galley from a Trident 1 and a partial cabin section, complete with seats, side panels and windows from Trident 3, G-AWZU (c/n 2321) which operated the type's last BA international service on December 31, 1985. The collection also has parts from the prototype aircraft which was scrapped in 1976, as well as many other Trident items of interest. Additionally there is an extensive reference library which would be of interest to both researchers, and enthusiasts alike. The collection can only be accessed by appointment. To book a free visit, please call 0208 867 2701 or 07733 303604 or alternatively send an e-mail to: g-awzk@msn.com

Kevin Bowen





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www.aircraftenthusiastfair.co.uk. 01372-705063

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CANADIAN CH

Both ends of the scale; in the background is one of Wardair Canada's Boeing 747s, while in front is de Havilland DH 53C Fox Moth, CF-DJB. This aircraft was donated by Maxwell Ward, to the National Museum in Ottawa. (Airteamimages.com/Caz Caswell)

This Convair 640 was acquired by Worldways Canada from Pacific Western Airlines in May 1976. It remained with the carrier until November 1982 when it was sold to Wright Air Lines and became N860FW. (Airteamimages.com/Caz Caswell)

During the 1970s, '80s, '90s and to a lesser extent the last decade, when visiting any of the major airports in Canada, it was pretty much a cast-iron guarantee that you would see one of the many, often colourful, Canadian charter carriers. These companies were servicing the needs of holiday and expat visitors to what is the second largest country in the world – in terms of overall landmass. Unfortunately, and with due respect to Air Transat, those days are now long gone. So over the next few pages we will take an affectionate look back over 40 years to revisit some of the many airlines that could be seen during this period, and which sadly, have now disappeared from the skies.

Wardair Canada (WD/WDA)

This Canadian bush operator's history goes back to 1946 when Maxwell Ward started flying from Yellowknife and Edmonton as the Polaris Charter Company with a single de Havilland DH 53C Fox Moth, providing services in support of the rapidly developing mining industry in the Yukon and Northwest Territories. After these proved successful Maxwell decided to

Martin Cartledge looks at a fascinating period of airline development in Canada, which included the evolution of the charter carriers.



form his own airline in 1952, naming it Wardair Ltd. Using the DHC-3 Otter he remained loyal to his bush-flying roots, that is until he changed the firm's name to Wardair Canada in 1961 to reflect a new direction for the business.

In the spring of 1962, the carrier entered the charter business and leased

its initial large aircraft, a four-engined Douglas DC-6 from Canadian Pacific Airlines. It launched its first charter passenger flights in southern Canada, with a return rotation from Calgary to Ottawa on May 10. However, Maxwell was determined not to restrict the carrier to simply operating charters within

"THESE COMPANIES WERE SERVICING THE NEEDS OF HOLIDAY AND EXPAT VISITORS TO WHAT IS THE SECOND LARGEST COUNTRY IN THE WORLD"



ARTER AIRLINES



Canada's borders. A month later, on June 22 it flew its inaugural overseas link from Edmonton to Copenhagen, Denmark transporting 88 war brides to visit their relatives in Europe. The success of this service, led to it continuing charters to Europe during the summer, while flying to the warmer climes of Mexico and California during the winter.

Wardair Canada still remained active in its home market, using a variety of different types, including Bristol 170s (see *Canada's Bristol Freighters* in the

latest edition of *Airliner Classics*), DHC-3 Otters and DHC-2 Beavers, which flew out of Yellowknife.

Its first jet airliner to enter service was a Boeing 727, which arrived in April 1966 (it was also the first-ever Boeing aircraft to operate in Canada). It was fitted with additional fuel tanks to enable it to fly across the Atlantic. A major milestone for Wardair Canada occurred a year later, when it left private ownership and became a public limited company. Long-haul links to Europe >>

Non-stop flights to Europe were made possible by the arrival of the carrier's first Boeing 707s. Pictured here is C-FZYP (c/n 20043), which was delivered on March 14, 1969 Force. (Airteamimages.com/Wolfgang Mendorf)



Far right • Douglas DC-8-62, C-GMXY (c/n 45920) of Canadian charter carrier Nationair taxiing at Hamilton International Airport in June 1989. On the top of the aircraft's fuselage is a message advertising the carrier's daily rotation between Montreal/Mirabel and Brussels, which started in May 1987. (Airteamimages.com/Caz Caswell)

Below • Taxiing at Toronto International Airport in July 1981 is this CP Air Boeing 727-217, C-GCPA (c/n 21055) named Empress of San Francisco. The aircraft was later leased to Dan-Air in April 1982 becoming G-BKAG; it was purchased by the Gatwick-based carrier two years later. (Airteamimages.com/Caz Caswell)

Canadian Pacific Airlines Douglas DC-6B, CF-CZU (c/n 45328), Empress of Honolulu, was delivered on June 17, 1957 and remained with the company until it was sold in November 1969. (Airteamimages Collection)

were boosted by the arrival of two 707s in 1968 enabling it to make non-stop flights, which were further enhanced by the delivery of a 747 five years later. Initially, long-haul rotations were flown from Edmonton but these were later moved to the major population centres of Vancouver and Toronto. Hawaii became a winter destination, while in the summer, London was added to its network.

During 1976 it underwent a reorganisation when Wardair Canada became a division of Wardair International, a holding company that also had interests in hotels and tour operators. The airline was a small, steadily-growing enterprise, but was not a discount carrier; instead it preferred to be known for providing good services at a lower-than-average price. It was also gaining a reputation for the high quality meals it provided and its friendly staff. The aircraft's seats featured a generous pitch, and it is remembered as one of the most luxurious Canadian carriers flying at the time.

By the mid-1980s Wardair Canada was at the height of its popularity, providing domestic links throughout Quebec,

Manitoba, Ontario, British Columbia and Alberta, as well as serving international destinations in the US (Fort Lauderdale, Honolulu, Miami, Orlando and Tampa), the Caribbean, South America and Europe (Frankfurt, Glasgow, Manchester and Gatwick) and carrying, on average, 1.25 million passengers per year.

By the mid-1980s Wardair Canada was facing some difficult challenges. It changed from charter flying to become a scheduled service provider, but problems with its computer booking system severely affected seat sales. This, combined with its failure to attract sufficient business customers away from the frequent flier programmes of competing airlines, threatened its finances. Its precarious position was exacerbated by a planned expansion of its network and fleet. It placed orders for 38 new aircraft including 14 Airbus A310s, 12 McDonnell Douglas MD-80s and 12 Fokker 100s a remarkable increase given that its fleet only totalled seven at the time. The exponential growth of its operations ultimately proved unsustainable, and it ran into serious financial difficulties, which ultimately

resulted in the Canadian Transportation Agency approving the sale of Wardair Canada to Canadian Airlines on March 31, 1989. Only the first 12 A310s had been delivered at the time of its sale; all of the remaining orders were cancelled.

CP Air (Canadian Pacific Air Lines) (CP/CPC)

Canadian Pacific Air Lines (CPAL) was formed in 1942 by the amalgamation of ten bush operations – Arrow Airways, Canadian Airways, Dominion Skyways, Ginger Coote Airways, Mackenzie Air Service, Prairie Airways, Quebec Airways, Starratt Airways, Wings Ltd and Yukon Southern Air Transport – when they were acquired by the Canadian Pacific Railway Company. The new airline had a fleet of around 120 aircraft from over 20 different manufacturers. During World War Two it carried out a lot of flying on behalf of the RAF and United States Army Air Force; CPAL pilots ferried many C-47s, C-54s transports and B-17 Flying Fortress bombers across the Atlantic. The company faced a major task after the end of the war, that of rationalising its entire fleet, reducing both the types and numbers of aircraft to more manageable proportions. It launched its first flights using just three types, Canadair C4 Argonauts, DC-3s and DC-6s.

The early management team consisted mainly of the bush flying pioneers from the amalgamated carriers, including its charismatic first President, Grant McConachie. The fledgling airline faced strong competition for route licences from Trans Canada Air Lines (later becoming Air Canada) with many decisions going in favour of the state-owned company. CPAL was forced to fly less lucrative routes as the federal





"MAXWELL WARD WAS DETERMINED NOT TO RESTRICT THE CARRIER TO SIMPLY OPERATING CHARTERS WITHIN CANADA'S BORDERS."



government established limits on its domestic market share, while restrictive international agreements also dictated which countries it could fly to. This barred it from many destinations, such as to London and Paris, while also limiting its access to major North American routes, including Vancouver-Toronto and Toronto-New York, which forced it to develop alternative overseas links.

Despite its battles to gain market penetration, it eventually found its

niche and became very successful. The evolution of the 'great circle' (also known as the polar) route enabled the carrier to fly over the North Pole (it was the second operator after SAS to do so) on services to Europe and the Far East. McConachie managed to secure rights to Amsterdam, Sydney, Hong Kong and Shanghai, which helped the company's revenues to grow from \$3 million in 1942 to \$61 million by 1964. Flights to Sydney and Hong Kong via Tokyo started in 1949 using

Pictured on final approach to Gatwick Airport is Nationalair Douglas DC-8-61, C-GMXB (c/n 45943). The aircraft had previously flown with Eastern Air Lines and Japan Air Lines before joining Nationalair in December 1984. (Airteamimages.com/Wolfgang Mendorf)

the Argonauts, which were then replaced by DC-4s three years later and then by DC-6Bs in 1953, while rotations to Lima, Peru began the same year and were extended onto Buenos Aires, Argentina in 1956. During the same year CPAL began replacing its DC-6s with turboprop Bristol Britannias.

CPAL entered the 'jet age' on March 25, 1961 following the arrival of the first of three DC-8s which it introduced into service on its Vancouver to Honolulu >>





link, while Amsterdam followed a month later. The airline was rebranded in 1968 to CP Air after its parent, the Canadian Pacific Railway Company (itself renamed Canadian Pacific Limited in 1971) had decided to align the carrier's name and logo to that of its other subsidiaries, including CP Hotels, CP Ships and CP Transport (CP Rail). At the same time each division was given a new look, and its own dominant colour, CP Air's being orange - it adopted the tag line 'Orange is Beautiful' for its advertising and promotional campaigns. The first aircraft to wear the revised livery was the carrier's first 737-217, CF-CPB (c/n 19884) which was delivered on October 21, 1968. The introduction of Boeing's new baby jet spelled the end for its remaining propeller-driven types which were progressively retired.

Despite CP Air struggling to gain a licence to fly scheduled services to Europe, it did manage to develop an extensive charter network (mainly during the summer months) to destinations

in Britain, France, Germany as well as many other European points which permitted the carrier to gain a foothold in these markets. CP Air celebrated the arrival of its first wide bodied airliner in 1973, in the shape of the 747 which was supplemented six years later by DC-10-30s. Later the same year the Canadian Federal Government finally removed all limitations on the carrier, allowing it to compete for any routes.

It had lobbied hard for this freedom and it now scrambled to upgrade its fleet to facilitate expansion into the newly available routes, including non-stop services from Vancouver to Hong Kong and Shanghai. In 1985 the carrier exchanged four 747s for more DC-10s with Pakistan International Airlines (PIA) - with the addition of extra fuel tanks, the range of the type was increased and CP Air became one of the largest operators of the type. It was also adding more rotations to its then current routes, such as Amsterdam, Rome, Tokyo and Sydney, as it prepared for increased

competition from Air Canada. The fleet expansion came at huge cost and created a \$1 billion debt, which with increased competition, and the economic downturn in Asia at this time, would work against CP Air in the future.

During the turmoil of deregulation of the Canadian commercial aviation industry in the mid-1980s, CP Air seized the opportunity to expand both its domestic market share and route network by forming partnerships with smaller feeder airlines, including AirBC, Eastern Provincial Airways and Nordair, the latter two eventually being amalgamated into the company. In early January 1986, CP Air announced it was rebranding and reverting to its original name of Canadian Pacific Air Lines, as well as phasing out its orange livery, replacing it with a new navy blue colour scheme and revised

CP Air aircraft were colourful visitors to the UK. Here Douglas DC-10-30, C-GCPI (c/n 48296) has just been pushed back from its stand at Birmingham International Airport in May 1982. (Airteamimages.com/ Carl Ford)

Worldways Canada leased this Lockheed L-1011 TriStar, N336EA (c/n 1143) for four months between June and October 1990. The aircraft retained its Eastern Air Lines' livery, but carried Worldways titles on the forward fuselage. (All images the author unless stated)

"DURING QUIETER PERIODS, NATIONAIR TRIED TO MAXIMISE THE USE OF ITS AIRCRAFT AND ENTERED INTO A NUMBER OF SUB-CONTRACTS."





logo. Later that year it became the first North American carrier to operate a non-stop service to mainland China with a weekly rotation to Shanghai.

The rebranding of the entire fleet was to be completed over a three-year period; however, the task wasn't completed because in 1987 CPAL was acquired by Calgary-based Pacific Western Airlines for \$300 million. The merger of both led to the formation of Canadian Airlines International in April 1987.

Holidair Airways (HOQ)

Based in Edmonton, Alberta, Holidair Airways was a wholly-owned subsidiary of Travel 'N' Save Holding Company of Toronto, and had a fleet of five DC-8-50s, although it appears the carrier only operated one of the jets with any regularity, C-FHAB (c/n 45658). It carried a livery of a dark blue upper and grey lower fuselage with cheat lines alternating gold, dark blue, gold and dark blue again. Its name was carried on the forward upper fuselage

Taxiing to the runway at Birmingham International Airport is this Worldways Canada Lockheed L-1011 TriStar, C-GIFE (c/n 1079). (Airteamimages.com/Keith Blincow)

Below - Pictured at Toronto International Airport in February 1998 is Royal Airlines' Boeing 737-242C, C-FNAQ (c/n 20455), which was acquired by the carrier in December 1997. (Airteamimages.com/Caz Caswell)

Bottom - Before joining Royal Airlines, this Boeing 727-212 operated with Singapore Airlines (9V-SXC) and Dan Air (G-BHVT). It was bought by Conifair Aviation in November 1992 and leased to Royal for seven years.

in white, with a large golden maple leaf on the tail. It was preparing to launch its inaugural flights in mid-December 1988 but a problem sourcing its first DC-8 forced Holidair to use wet-leased aircraft and American crews for these early services, with a 727 and Lockheed L-1011 TriStar being chartered from the US. Finally, in late December its DC-8 was finally delivered and it started flying between Calgary and Los Vegas. It also operated rotations to Cancun, Mexico and Honolulu, Hawaii. However, when its parent company collapsed in October 1989 this had the inevitable knock-on effect, and Holidair Airways ceased trading shortly afterwards.

Nationair (NX/NXA)

Nationair was founded in 1984 and launched its first service in December that year flying from Montreal to Haiti using a DC-8. It operated throughout the late 1980s and early 1990s from bases in Montreal and Toronto as well as flying seasonal flights from Quebec City

and Hamilton, Ontario. At one point, Nationair was Canada's third largest carrier, after Air Canada and Canadian Airlines International. Destinations during the winter months were mostly to the warmer climes of Florida, the Caribbean, Mexico and South America for the so-called snowbirds - people who spend a large portion of winter in warmer locations. Its summer services included Vancouver and Calgary, as well as a heavy emphasis on European destinations - mainly England, Scotland, Portugal and France. It started a year-round scheduled daily rotation between Montreal/Mirabel and Brussels on May 3, 1987 and a year later, launched a Hamilton to Gatwick link.

The company attempted to compete head-to-head with Air Canada and Canadian Airlines International by offering scheduled flights between Toronto and Montreal with cheaper fares and flexible ticket conditions, but its rivals reacted to the challenge by cutting their prices, forcing Nationair >>





to terminate its service. Its fleet was upgraded by the arrival in the summer of 1990 of the first of two 757s acquired from another charter carrier, Odyssey International, which had gone out of business earlier in the year. The jet's arrival marked the introduction of a revised livery for its fleet – the colourful red and grey colour scheme was replaced with overall white, and just the company's logo sported the old colours. Soon after this, Nationair received its first wide-bodied airliner following the delivery of its initial 747.

During quieter periods, Nationair tried to maximise the use of its aircraft and entered into a number of sub-contracts. Its fleet was particularly busy transporting troops and freight in the run-up to the first Gulf War, and it was also used by the United Nations to move troops into Namibia as well as offering Hajj flights on behalf of Nigeria Airways in 1991. Unfortunately, while operating Flight No 2120 on behalf of the African carrier, its DC-8-61, C-GMXQ (c/n 45982) suffered hydraulic problems shortly after take-off. It crashed while attempting to return to King Abdulaziz International Airport, Jeddah with the loss of 261 lives, including the 14 Canadian crew members. The cause of the accident was found to be under-inflated tyres, which overheated and caught fire and in turn caused the hydraulic systems to fail.

The accident only served to further damage Nationair's increasingly poor reputation with passengers and tour

This Airbus A320-211, C-GVXA (c/n 397) was leased from International Lease Finance Corporation until the carrier suddenly collapsed on November 8, 2001 without warning, leaving 50,000 of its passengers stranded and its fleet grounded at airports around the world. (Airteamimages.com/Caz Caswell)

One of the smaller Canadian charter operators, Crownair was formed in 1984 and started operations using this Douglas DC-8-52, C-FCRN (c/n 45752). (Airteamimages.com/Caz Caswell)

Boeing 767-375ER, C-FCAG (c/n 24085) was delivered new to Canadian Airlines International on May 19, 1988 and remained with the carrier until its merger with Air Canada when it was transferred to the Canadian national airline's fleet. (Airteamimages.com/Caz Caswell)

operators alike. These difficulties were compounded by a union dispute lasting 15 months and by the time this was settled the airline found itself in a parlous financial position, owing the government millions of dollars in unpaid landing fees. The company disposed of several aircraft that it owned and withdrew from the scheduled market, claiming that offering low prices was simply not profitable. However, with no likelihood of salvation, Nationair's management was left with no alternative

– it filed for bankruptcy protection in March 1993, and just a month later ceased flying for good.

Worldways Canada (WG/WWC)

Worldways Airlines was founded in 1974 by Roy T Moore in Toronto with the specific intention of operating as a charter company, flying both passengers and cargo. It launched its first freight and courier services in 1975 using a pair of Gates Learjets and a DC-4. The following year the fleet was increased by



the introduction of two Convair CV-640s, which became popular for sporting team charters. The carrier's inaugural transatlantic flights were launched on June 21, 1981 from Toronto to Terceira in the Azores using a former British Caledonian 707 and were later extended to London, Paris and Frankfurt.

By now it had changed its name to Worldways Canada and had acquired two further 707s before replacing all three with DC-8-63s in 1983. One of these were chartered by the Canadian Department of Defence in 1986 for troop transport flights, flying regularly between Trenton and Lahr, Germany via Gatwick. Additional long-term charter contracts were signed with Echo Bay Mines which saw the Lockheed L-100 Hercules being added to its fleet, and Petrocanada in Newfoundland which used a CV-640 for supply runs. The carrier's first widebody aircraft was introduced into its fleet in June 1985 in the form of

"ITS FLEET OF 747S WAS EVENTUALLY NAMED AFTER FAMOUS CANADIAN AVIATION PIONEERS INCLUDING GRANT MCCONACHIE, MAXWELL WARD AND T RUSS BAKER..."

an L-1011 TriStar. It eventually operated four of the type on services to Europe, the Caribbean and to Central America.

In common with many carriers at the time, the worldwide recession had a dramatic effect on Worldways Canada, routes were dropped, staff made redundant and its finances suffered. The company's continuing monetary difficulties first led to the suspension of all services at the end of October 1990 and then into bankruptcy at the beginning of 1991.

Royal Airlines (OQ/ROY)

Royal Airlines was established in 1991 by Michel Leblanc as a division of Royal Aviation based at Montreal/Dorval International Airport (known as Montreal/Pierre Elliott Trudeau International today). Over the next decade the carrier built up its fleet, operating 757s, A310s and L-1011 TriStars and, surprisingly, even used 727s on charter flights across the Atlantic to destinations in the UK and Europe. However, a decade after it launched its first services, the company was struggling and according to analysts at the time, it had few options and little time left, so it agreed to merge with Canada 3000. Leblanc became Vice-Chairman of the merged company, but he only held the post for a few months – apparently owing to a bitter feud.

It took a significant period for Royal's aircraft to be re-painted into Canada 3000's livery, and during this spell many wore a hybrid scheme consisting of the new titles over the original tail design.

Canada 3000 (2T/CMM)

From its bases in Toronto and Montreal, Canada 3000 was a Canadian discount charter carrier that offered domestic and international flights, and grew to become the largest charter airline in the world at the height of its operations, flying to more than 90 destinations worldwide. It was created in 1988 by the British company Air 2000, initially to utilise some of its fleet for the Canadian charter travel market during the typically slack time of the European winter. However, the British company was denied a licence by the National Transport Agency (NTA) because of its control and ownership by a UK business. As a result, Air 2000 relinquished ownership, and the now Canadian-owned carrier started flying in December of that year. In May 1989, by order of the NTA, the company changed its name to Canada 3000. A year later it was acquired by Vacationair and, following the demise of Wardair in 1991 it achieved its goal of becoming Canada's largest charter carrier.

In 2000, Canada 3000 became a public limited company and the following year it went on a shopping spree,

Opposite • The first Airbus A330-202, C-GGWB (c/n 211) was delivered to the former charter airline Canada 3000 under a lease agreement with International Lease Finance Corporation (ILFC) in April 1998. The aircraft was operated across the carrier's long-haul network until its collapse in November 2001. The A330 was impounded at Manchester Airport by owners ILFC.

An evocative picture of one of Canadian Airlines International's Boeing 747-475s, C-FCRA (c/n 24895) turning over Kowloon, Hong Kong on its approach into Kai Tak International Airport. (Airteamimages.com/Simon Gregory)





buying Royal Airlines of Montreal and CanJet Airlines. Following the merger of Canadian Airlines International with Air Canada, Canada 3000 started flying scheduled services, and in October 2001, it became the first carrier to fly non-stop rotations from North America to India.

On November 8, 2001 the company suddenly collapsed without warning, leaving 50,000 of its passengers stranded and its fleet grounded at airports around the world. It had no option but to file for bankruptcy becoming one of the first carriers to succumb following the September 11 terrorist attacks on the US. This was rather ironic as the day before the atrocities it had achieved record bookings in a single day, but the fall in demand that followed was just too much.

Moves were made to try to save it; the Canadian Government offered a \$75 million loan guarantee under the condition that a "viable business plan" was produced. At the time of its demise Canada 3000 was in \$260 million debt and had limited cash reserves. It held secret talks with the unions to try to help reduce its costs, but the offers made were simply not enough and the airline applied for bankruptcy protection. Irony struck again – on the very day Canada 3000 stopped flying, Canada's Transport Ministry ruled in favour of the carrier in a dispute with Air Canada's rival low-fare start-up, Tango, which had been competing unfairly, but the decision came just too late to save the airline.

Canadian Airlines International (CP/CDN)

Canadian Airlines International was formed in 1987 when the small regional carrier Pacific Western Airlines announced it was purchasing Canadian Pacific Air. The combined operation unveiled a new livery of light and dark grey, navy blue and red with a stylised title of Canadi>n which was a clever alternative for the company's bilingual name – Canadian/Canadien). In 1989, in

Another Canadian charter operator was Ontario Worldair, which was formed in 1978. This Boeing 707-338C, C-GRYN (c/n 19623) was leased from ITEL Corporation between November 1978 and January 1981 when the carrier ceased all operations. The company's management went on to form Crownair.

"IT HAD NO OPTION BUT TO FILE FOR BANKRUPTCY BECOMING ONE OF THE FIRST CARRIERS TO SUCCUMB FOLLOWING THE SEPTEMBER 11 TERRORIST ATTACKS ON THE US."

an attempt to strengthen itself against competition from Air Canada, Canadian Airlines acquired Wardair Canada, giving it access to new routes, including long sought-after links to the UK and Europe.

The company took delivery of its first 767 in 1988 and this was followed two years later by the arrival of its initial 747-400. Its fleet of 747s was eventually named after famous Canadian aviation pioneers including Grant McConachie, Maxwell Ward, T Russ Baker and Rhys T Eyton, the former President and CEO of

This Douglas DC-8-63, C-GQBA (c/n 46155) was operated by Quebecair under a lease agreement from International Air Lease between May 1984 and September 1996. It was later acquired and flown Nationalair.

Pacific Western Airlines.

Following approval by the Canadian regulatory authorities in 1995, AMR Corporation (parent of American Airlines) took a 33% shareholding in Canadian Airlines Corporation. The carrier adopted a short-lived re-brand in January 1999, less than a year before it merged with Air Canada. Known as 'Proud Wings' the livery featured a large Canada Goose painted on the tail, with the company's name appearing in a revised font. However, subsequent events meant that the new livery was short lived and appeared on very few aircraft.

During the latter half of 1999 there were fierce takeover battles being fought between the major Canadian carriers. Together with its partner AMR, Canadian Airlines attempted to acquire a majority stake in Air Canada, but eventually the national flag carrier, with help from its financially strong Star Alliance partners, was able to turn the tables by acquiring a 82% holding in Canadian Airlines instead. In the first year of the new millennium, there was a redistribution of routes and responsibilities between the two companies.

Canadian Airlines continued to operate independently for a short time, but its aircraft were eventually repainted into the Air Canada livery. During this transitional period its jets wore a hybrid colour scheme of the national carrier's tail design, while retaining the name 'Canadi>n' on the fuselage. **W/W**



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key

Acronyms and abbreviations have become an intrinsic part of business speak. In the commercial aviation business their usage has become unavoidable and in the following table we try to guide you through some of those most commonly-used examples in the pages of Airliner World. This list will be regularly updated.

AAIB Air Accidents Investigation Branch (UK)
ACAS Airborne Collision-Avoidance System
ADR Accident Data Recorder
ALPA Air Line Pilots Association (US)
ANS Airborne Navigation System
APU Auxiliary Power Unit
ATC Air Traffic Control
ATP Advanced Turbo-Prop (BAe)
ATS Air Traffic Service
BAe British Aerospace (now renamed BAE Systems)
CAA Civil Aviation Authority (UK)
CDA Continuous Descent Approach
CEO Chief Executive Officer
CIS Commonwealth of Independent States (formerly Soviet Union)
c/n Construction number
combi Aircraft that routinely carry passengers and cargo on the main deck at the same time
CVR Cockpit Voice Recorder
dB Decibel
DfT Department for Transport (UK)
DME Distance-Measuring Equipment
EADS European Aeronautic Defence and Space Company
EASA European Aviation Safety Agency
ERAA European Regions Airline Association
EROPS Extended-Range Operation

ETOPS Extended-range Twin-engine Operation
FAA Federal Aviation Administration (US)
FAI Fédération Aéronautique Internationale (France)
FAR Federal Aviation Regulations (US)
FBO Fixed Base Operator
FDR Flight Data Recorder
FL Flight Level (usually expressed in hundreds of feet)
FOD Foreign Object Damage
GA General Aviation
GAPAN Guild of Air Pilots And Navigators (UK)
GDP Gross Domestic Product
GE General Electric
GECAS GE Capital Aviation Services
GMT Greenwich Mean Time
GNS Global Navigation System
GPS Global Positioning System
GPU Ground Power Unit
IACA International Air Carrier Association
IAP International Airport
IATA International Air Transport Association
ICAO International Civil Aviation Organization
IFALPA International Federation of Air Line Pilots Associations
IFR Instrument Flight Rules
ILFC International Lease Finance Corporation
ILS Instrument Landing System
IMC Instrument Meteorological Conditions
INS Inertial Navigation System
JAA Joint Aviation Authorities (European)
LCC Low-Cost Carrier
LCD Liquid Crystal Display

LED Light-Emitting Diode
localiser Steering guidance element of an ILS system
LORAN Long Range Aid to Navigation
MD Managing Director
MLS Microwave Landing System
MLW Maximum Landing Weight
MoD Ministry of Defence (UK)
MoU Memorandum of Understanding
MRO Maintenance, Repair and Overhaul
MTOW Maximum Take-Off Weight
NASA National Aeronautics and Space Administration (US)
NATO North Atlantic Treaty Organization
NBAA National Business Aircraft Association (US)
OFT Office of Fair Trading (UK)
PAPI Precision Approach Path Indicator
PAR Precision Approach Radar
pax Passenger
P&W Pratt & Whitney
PPL Private Pilot's Licence
PR Public Relations
RFP Request for Proposals
RVR Runway Visual Range
SARS Severe Acute Respiratory Syndrome
SID Standard Instrument Departure
STAR Standard Terminal Arrival Route
STOL Short Take-Off & Landing
TCAS Traffic alert and Collision-Avoidance System
TWR Tower - airport control tower
VASI Visual Approach Slope Indicator
VFR Visual Flight Rules
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